NOTIFICATION OF ADDENDUM

ADDENDUM NO. 1

DATED 10/03/2013

Control	**0016-02-135, ETC.**
Project	**PTF 2013(927), ETC.**
Highway	**IH 35, ETC.**
County	**HAYS**

Ladies/Gentlemen:

Attached please find an addendum on the above captioned project. Included in the attachment is an adendum notification which details the changes and the respective proposal pages which were added and/ or changed.

Except for new bid insert pages, it is unnecessary to return any of the pages attached.

Bid insert pages must be returned with the bid proposal submitted to the Department, unless your firm is submitting a bid using a computer print out. The computer print out must be changed to reflect the new bid item information.

Contractors and material suppliers, etc. who have previously been furnished informational proposals are not being furnished a copy of the addendum. If you have a subcontractor on the above project, please advise them of this addendum. Acknowledgment of this addendum is not requested if your company has been issued a proposal stamped “This Proposal Issued for Informational Purposes.”

You are required to acknowledge receipt of this addendum on the Addendum Acknowledgement form contained in your bid proposal by placing a mark in the box next to the respective addendum.

Failure to Acknowledge receipt of this addendum in your bid proposal will result in your bid not being read.

04/99

SUBJECT: PLANS AND PROPOSAL ADDENDUMS
PROJECT: PTF 2013(927) CONTROL: 0016-02-135
COUNTY: HAYS
LETTING: 10/09/2013
REFERENCE NO: 1002

PROPOSAL ADDENDUMS

_ PROPOSAL COVER
X BID INSERTS (SH. NO.: 3,12 OF 23)
X GENERAL NOTES (SH. NO.: SH B,I)
_ SPEC LIST (SH. NO.:)
_ SPECIAL PROVISIONS:
ADDED:

DELETED:

_ SPECIAL SPECIFICATIONS:
ADDED:

DELETED:

X OTHER: PLAN SHEETS

DESCRIPTION OF ABOVE CHANGES
(INCLUDING PLANS SHEET CHANGES)

BID INSERTS-
****
REVISED QUANTITY FOR THE FOLLOWING BID ITEMS:
402-2001, 618-2024
BID INSERT SHEETS 3,12 OF 23 CHANGED AS A RESULT

GENERAL NOTES-
****
SHEET B: ADDED NOTE ABOUT AT&T TOLL FIBER OPTIC LINE
SHEET I, ITEM 8: ADDED NOTE ABOUT UTILITIES AND CONTACT INFO

PLAN SHEETS-
****
SHEETS 4,4A-4V: REVISED AND SHIFTED GENERAL NOTES AS INDICATED ABOVE
SHEETS 5,5B: REVISED E&Q SHEETS TO REFLECT QUANTITY CHANGES ABOVE
SHEET 29: ADDED UTILITIES TO SEQUENCE OF CONSTRUCTION
SHEETS 172-176: UPDATED EXISTING UTILITIES
SHEETS 421-426: REVISED JOINT DUCTBANK UTILITY DETAIL SHEETS

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	100	2002	002	PREPARING ROW DOLLARS and CENTS	STA	47.000	1
	104	2001		REMOVING CONC (PAV) DOLLARS and CENTS	SY	2,587.000	2
	104	2009		REMOVING CONC (RIPRAP) DOLLARS and CENTS	SY	1,117.000	3
	104	2011		REMOVING CONC (MEDIANS) DOLLARS and CENTS	SY	162.000	4
	104	2013		REMOVING CONC (FOUNDATIONS) DOLLARS and CENTS	SY	11.000	5
	104	2022		REMOVING CONC (CURB AND GUTTER) DOLLARS and CENTS	LF	283.000	6
	104	2023		REMOVING CONC (CTB) DOLLARS and CENTS	LF	130.000	7
	104	2024		REMOVING CONC (RETAINING WALLS) DOLLARS and CENTS	SY	87.000	8
	104	2037		REMOVE CONC (RAIL) DOLLARS and CENTS	LF	230.000	9
	106	2002		OBLITERATING ABANDONED ROAD DOLLARS and CENTS	SY	3,293.000	10
	110	2001		EXCAVATION (ROADWAY) DOLLARS and CENTS	CY	19,935.000	11

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	ITEM NO	DESC CODE	S.P. NO.				
	132	2005		EMBANKMENT (FINAL)(ORD COMP)(TY C) DOLLARS and CENTS	CY	109,447.000	12
	160	2003		FURNISHING AND PLACING TOPSOIL (4") DOLLARS and CENTS	SY	69,919.000	13
	164	2027	002	CELL FBR MLCH SEED(PERM)(URBAN)(CLAY) DOLLARS and CENTS	SY	69,919.000	14
	164	2029	002	CELL FBR MLCH SEED(TEMP)(WARM) DOLLARS and CENTS	SY	34,968.000	15
	164	2031	002	CELL FBR MLCH SEED(TEMP)(COOL) DOLLARS and CENTS	SY	34,968.000	16
	168	2001		VEGETATIVE WATERING DOLLARS and CENTS	MG	2,099.000	17
	169	2001	002	SOIL RETENTION BLANKETS (CL 1) (TY A) DOLLARS and CENTS	SY	7,768.000	18
	247	2392	033	FL BS(CMP IN PLC)(TY D GR 5)(FNAL POS) DOLLARS and CENTS	CY	15,722.000	19
	251	2103		REWORK BS MATL (TY A)(2") DOLLARS and CENTS	SY	5,122.000	20
	260	2002	003	LIME (HYDRATED LIME (SLURRY)) DOLLARS and CENTS	TON	752.000	21

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	ITEM NO	DESC CODE	S.P. NO.				
	260	2027	003	LIME TRT (EXST MATL)(8") DOLLARS and CENTS	SY	31,319.000	22
	310	2005		PRIME COAT (MC-30 OR AE-P) DOLLARS and CENTS	GAL	6,351.000	23
	354	2021		PLANE ASPH CONC PAV(0" TO 2") DOLLARS and CENTS	SY	540.000	24
	360	2003	003	CONC PVMT (CONT REINF-CRCP)(10") DOLLARS and CENTS	SY	7,551.000	25
	402	2001		TRENCH EXCAVATION PROTECTION DOLLARS and CENTS	LF	640.000	26
	403	2001		TEMPORARY SPL SHORING DOLLARS and CENTS	SF	12,635.000	27
	416	2004	001	DRILL SHAFT (36 IN) DOLLARS and CENTS	LF	1,462.000	28
	416	2006	001	DRILL SHAFT (48 IN) DOLLARS and CENTS	LF	286.000	29
	416	2032	001	DRILL SHAFT (TRF SIG POLE) (36 IN) DOLLARS and CENTS	LF	100.000	30
	420	2001	002	CL A CONC (MISC) DOLLARS and CENTS	CY	1.000	31
	420	2003	002	CL C CONC (ABUT) DOLLARS and CENTS	CY	190.600	32

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	ITEM NO	DESC CODE	S.P. NO.				
	420	2004	002	CL C CONC (BENT) DOLLARS and CENTS	CY	182.300	33
	420	2006	002	CL C CONC (RAIL FOUNDATION) DOLLARS and CENTS	CY	36.500	34
	420	2013	002	CL C CONC (MISC) DOLLARS and CENTS	CY	6.000	35
	420	2029	002	CL S CONC (SLAB) DOLLARS and CENTS	CY	828.300	36
	420	2031	002	CL S CONC (SHEAR KEY) DOLLARS and CENTS	CY	344.800	37
	420	2033	002	CL S CONC (APPR SLAB) DOLLARS and CENTS	CY	371.500	38
	420	2034	002	CL S CONC (BRIDGE SDWLK) DOLLARS and CENTS	CY	93.800	39
	420	2076	002	CL C CONC (TRAFFIC RAIL) DOLLARS and CENTS	CY	9.900	40
	420	2080	002	CL C CONC(DECORATIVE OBELISK) DOLLARS and CENTS	CY	48.000	41
	423	2001		RETAINING WALL (MSE) DOLLARS and CENTS	SF	41,747.000	42
	425	2012	001	PRESTR CONC BOX BEAM (4B40) DOLLARS and CENTS	LF	1,082.210	43

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	ITEM NO	DESC CODE	S.P. NO.				
	425	2013	001	PRESTR CONC BOX BEAM (5B40) DOLLARS and CENTS	LF	6,050.630	44
	432	2001		RIPRAP (CONC)(4 IN) DOLLARS and CENTS	CY	300.000	45
	432	2002		RIPRAP (CONC)(5 IN) DOLLARS and CENTS	CY	48.000	46
	432	2039		RIPRAP (MOW STRIP)(4 IN) DOLLARS and CENTS	CY	339.000	47
	432	2048		RIPRAP (CONC)(FLUME) DOLLARS and CENTS	CY	72.000	48
	442	2048	016	STRUCTURAL STEEL(MISC NON-BRIDGE) DOLLARS and CENTS	LB	882.000	49
	450	2006	001	RAIL (TY T411) DOLLARS and CENTS	LF	907.400	50
	450	2018	001	RAIL (TY C411) DOLLARS and CENTS	LF	697.800	51
	450	2077	001	RAIL (HANDRAIL)(TY F) DOLLARS and CENTS	LF	551.000	52
	450	2143	001	RAILING (TY T551) DOLLARS and CENTS	LF	230.000	53
	454	2001	003	SEALED EXPANSION JOINT (4 IN)(SEJ-A) DOLLARS and CENTS	LF	302.000	54

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	ITEM NO	DESC CODE	S.P. NO.				
	462	2018	015	CONC BOX CULV (7 FT X 7 FT) DOLLARS and CENTS	LF	49.000	55
	464	2001	006	RC PIPE (CL III)(12 IN) DOLLARS and CENTS	LF	8.000	56
	464	2003	006	RC PIPE (CL III)(18 IN) DOLLARS and CENTS	LF	1,358.000	57
	464	2005	006	RC PIPE (CL III)(24 IN) DOLLARS and CENTS	LF	114.000	58
	464	2035	006	RC PIPE (CL V)(18 IN) DOLLARS and CENTS	LF	128.000	59
	464	2036	006	RC PIPE (CL V)(24 IN) DOLLARS and CENTS	LF	10.000	60
	465	2002	001	INLET (COMPL)(TY E) DOLLARS and CENTS	EA	1.000	61
	465	2010	001	INLET (COMPL)(TY AAD) DOLLARS and CENTS	EA	2.000	62
	465	2011	001	INLET (COMPL)(TY AD) DOLLARS and CENTS	EA	1.000	63
	465	2013	001	MANH (COMPL)(TY A) DOLLARS and CENTS	EA	1.000	64
	465	2133	001	INLET (COMPL)(TY IIR)(10’) DOLLARS and CENTS	EA	4.000	65

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	ITEM NO	DESC CODE	S.P. NO.				
	465	2134	001	INLET (COMPL)(TY IIR)(15') DOLLARS and CENTS	EA	8.000	66
	465	2242	001	INLET (COMPL)(CURB)(TY II)(10')(SPL) DOLLARS and CENTS	EA	2.000	67
	466	2333		WINGWALL (PW-1)(HW=10 FT) DOLLARS and CENTS	EA	1.000	68
	466	2336		WINGWALL (PW-1)(HW=13 FT) DOLLARS and CENTS	EA	1.000	69
	467	2209		SET (TY II)(18 IN)(RCP)(3:1)(C) DOLLARS and CENTS	EA	3.000	70
	467	2222		SET (TY II)(18 IN)(RCP)(4:1)(C) DOLLARS and CENTS	EA	3.000	71
	467	2224		SET (TY II)(24 IN)(RCP)(4:1)(C) DOLLARS and CENTS	EA	1.000	72
	467	2234		SET (TY II)(18 IN)(RCP)(6:1)(C) DOLLARS and CENTS	EA	3.000	73
	467	2286		SET (TY II)(18 IN)(RCP)(6:1)(P) DOLLARS and CENTS	EA	18.000	74
	467	2288		SET (TY II)(24 IN)(RCP)(6:1)(P) DOLLARS and CENTS	EA	4.000	75
	496	2002		REMOV STR (INLET) DOLLARS and CENTS	EA	1.000	76

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	ITEM NO	DESC CODE	S.P. NO.				
	496	2004		REMOV STR (SET) DOLLARS and CENTS	EA	10.000	77
	496	2005		REMOV STR (WINGWALL) DOLLARS and CENTS	EA	2.000	78
	496	2010		REMOV STR (BRIDGE 100-499 FT LENGTH) DOLLARS and CENTS	EA	1.000	79
	496	2016		REMOV STR (PIPE) DOLLARS and CENTS	EA	4.000	80
	500	2001	011	MOBILIZATION DOLLARS and CENTS	LS	1.000	81
	502	2001	033	BARRICADES, SIGNS AND TRAFFIC HANDLING DOLLARS and CENTS	MO	20.000	82
	508	2002		CONSTRUCTING DETOURS DOLLARS and CENTS	SY	7,258.000	83
	512	2001	002	PORT CTB (FUR & INST)(SAFETY SH)(TY 1) DOLLARS and CENTS	LF	4,830.000	84
	512	2008	002	PORT CTB (FUR & INST)(LOW PROF)(TY 1) DOLLARS and CENTS	LF	5,000.000	85
	512	2009	002	PORT CTB (FUR & INST)(LOW PROF)(TY 2) DOLLARS and CENTS	LF	160.000	86

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	ITEM NO	DESC CODE	S.P. NO.				
	512	2026	002	PORT CTB (MOVE)(LOW PROF)(TY 1) DOLLARS and CENTS	LF	9,540.000	87
	512	2027	002	PORT CTB (MOVE)(LOW PROF)(TY 2) DOLLARS and CENTS	LF	280.000	88
	512	2037	002	PORT CTB (REMOVE)(SAFETY SH)(TY 1) DOLLARS and CENTS	LF	4,830.000	89
	512	2044	002	PORT CTB (REMOVE)(LOW PROF)(TY 1) DOLLARS and CENTS	LF	5,000.000	90
	512	2045	002	PORT CTB (REMOVE)(LOW PROF)(TY 2) DOLLARS and CENTS	LF	160.000	91
	514	2004	002	PERM CONC TRF BARR (SGL SLP)(TY 1)(42") DOLLARS and CENTS	LF	180.000	92
	514	2006	002	PERM CONC TRF BARR (SGL SLP)(TY 3)(42") DOLLARS and CENTS	LF	340.000	93
	529	2029		CONC CURB & GUTTER (TY II A) DOLLARS and CENTS	LF	3,916.000	94
	529	2030		CONC CURB (MONO) (TY II A) DOLLARS and CENTS	LF	337.000	95
	530	2010	006	DRIVEWAYS (CONC) DOLLARS and CENTS	SY	1,211.000	96
	530	2011	006	DRIVEWAYS (ACP) DOLLARS and CENTS	SY	296.000	97

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	ITEM NO	DESC CODE	S.P. NO.				
	531	2005		CURB RAMPS (TY 1) DOLLARS and CENTS	EA	4.000	98
	531	2009		CURB RAMPS (TY 6) DOLLARS and CENTS	EA	4.000	99
	531	2010		CURB RAMPS (TY 7) DOLLARS and CENTS	EA	2.000	100
	531	2014		CURB RAMPS (TY 22) DOLLARS and CENTS	EA	6.000	101
	531	2017		CURB RAMPS (TY 21) DOLLARS and CENTS	EA	2.000	102
	531	2024		CONC SIDEWALK (5") DOLLARS and CENTS	SY	184.000	103
	540	2001	031	MTL W-BEAM GD FEN (TIM POST) DOLLARS and CENTS	LF	5,413.000	104
	540	2011	031	MTL BEAM GD FEN TRANS (THRIE-BEAM) DOLLARS and CENTS	EA	5.000	105
	540	2044	031	DOWNSTREAM ANCHOR TERMI-NAL(DAT)SECTION DOLLARS and CENTS	EA	15.000	106
	542	2001		REMOVING METAL BEAM GUARD FENCE DOLLARS and CENTS	LF	3,999.000	107

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	ITEM NO	DESC CODE	S.P. NO.				
	542	2002		REMOVING TERMINAL ANCHOR SECTION DOLLARS and CENTS	EA	12.000	108
	542	2003		RM MTL BM GD FEN TRANS (THRIE-BEAM) DOLLARS and CENTS	EA	5.000	109
	544	2001		GUARDRAIL END TREATMENT (INSTALL) DOLLARS and CENTS	EA	14.000	110
	544	2003		GUARDRAIL END TREATMENT (REMOVE) DOLLARS and CENTS	EA	16.000	111
	545	2001		CRASH CUSH ATTEN (INSTL) DOLLARS and CENTS	EA	2.000	112
	545	2003		CRASH CUSH ATTEN (REMOVE) DOLLARS and CENTS	EA	2.000	113
	556	2006		PIPE UNDERDRAINS (TY 6) (6") DOLLARS and CENTS	LF	100.000	114
	610	2060	015	INS RD IL AM (U/P) (TY 1) (.15KW)S DOLLARS and CENTS	EA	10.000	115
	610	2061	015	INS RD IL AM (U/P) (TY 2) (.15KW)S DOLLARS and CENTS	EA	10.000	116
	610	2072	015	REMOVE RDWY ILL ASSEM DOLLARS and CENTS	EA	2.000	117
	618	2011		CONDT (HDPE) (4") DOLLARS and CENTS	LF	5,574.000	118

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	ITEM NO	DESC CODE	S.P. NO.				
	618	2012		CONDT (PVC) (SCHD 40) (1") DOLLARS and CENTS	LF	953.000	119
	618	2018		CONDT (PVC) (SCHD 40) (2") DOLLARS and CENTS	LF	3,915.000	120
	618	2020		CONDT (PVC) (SCHD 40) (2 1/2") DOLLARS and CENTS	LF	2,224.000	121
	618	2022		CONDT (PVC) (SCHD 40) (3") DOLLARS and CENTS	LF	3,558.000	122
	618	2024		CONDT (PVC) (SCHD 40) (4") DOLLARS and CENTS	LF	3,101.000	123
	618	2035		CONDT (PVC) (SCHD 80) (2") (BORE) DOLLARS and CENTS	LF	50.000	124
	618	2046		CONDT (RM) (1") DOLLARS and CENTS	LF	464.000	125
	620	2009	001	ELEC CONDR (NO. 6) BARE DOLLARS and CENTS	LF	694.000	126
	620	2010	001	ELEC CONDR (NO. 6) INSULATED DOLLARS and CENTS	LF	1,388.000	127
	620	2011	001	ELEC CONDR (NO. 8) BARE DOLLARS and CENTS	LF	8,644.000	128
	620	2012	001	ELEC CONDR (NO. 8) INSULATED DOLLARS and CENTS	LF	8,023.000	129

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	ITEM NO	DESC CODE	S.P. NO.				
	624	2008	014	GROUND BOX TY A (122311) W/APRON DOLLARS and CENTS	EA	8.000	130
	624	2014	014	GROUND BOX TY D (162922) W/APRON DOLLARS and CENTS	EA	11.000	131
	628	2018	003	ELC SRV TY A 240/480 060 (NS)SS(E)SP(U) DOLLARS and CENTS	EA	1.000	132
	628	2100	003	ELC SRV TY D 120/240 070 (NS)SS(E)SP(O) DOLLARS and CENTS	EA	1.000	133
	636	2001	014	ALUMINUM SIGNS (TY A) DOLLARS and CENTS	SF	66.000	134
	644	2001		IN SM RD SN SUP&AM TY10BWG(1)SA(P) DOLLARS and CENTS	EA	55.000	135
	644	2004		IN SM RD SN SUP&AM TY10BWG(1)SA(T) DOLLARS and CENTS	EA	79.000	136
	644	2006		IN SM RD SN SUP&AM TY10BWG(1)SA(U) DOLLARS and CENTS	EA	7.000	137
	644	2060		REMOVE SM RD SN SUP & AM DOLLARS and CENTS	EA	102.000	138
	658	2260		INSTL DEL ASSM (D-SW)SZ (TYC)GF1 DOLLARS and CENTS	EA	17.000	139
	658	2279		INSTL DEL ASSM (D-SY)SZ (TYC)GF1 DOLLARS and CENTS	EA	29.000	140

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	ITEM NO	DESC CODE	S.P. NO.				
	658	2316		INSTL OM ASSM (OM-2Z)(FLX)GND DOLLARS and CENTS	EA	1.000	141
	662	2004		WK ZN PAV MRK NON-REMOV (W) 4" (SLD) DOLLARS and CENTS	LF	24,257.000	142
	662	2032		WK ZN PAV MRK NON-REMOV (Y) 4" (SLD) DOLLARS and CENTS	LF	24,266.000	143
	662	2064		WK ZN PAV MRK REMOV (W) 4" (BRK) DOLLARS and CENTS	LF	650.000	144
	662	2067		WK ZN PAV MRK REMOV (W) 4" (SLD) DOLLARS and CENTS	LF	23,976.000	145
	662	2075		WK ZN PAV MRK REMOV (W) 8" (SLD) DOLLARS and CENTS	LF	1,340.000	146
	662	2079		WK ZN PAV MRK REMOV (W) 24" (SLD) DOLLARS and CENTS	LF	328.000	147
	662	2099		WK ZN PAV MRK REMOV (Y) 4" (SLD) DOLLARS and CENTS	LF	21,103.000	148
	662	2113		WK ZN PAV MRK SHT TERM (TAB) TY W DOLLARS and CENTS	EA	10,000.000	149
	662	2114		WK ZN PAV MRK SHT TERM (TAB) TY Y DOLLARS and CENTS	EA	40,000.000	150
	666	2003		REFL PAV MRK TY I (W) 4" (BRK)(100MIL) DOLLARS and CENTS	LF	8,030.000	151

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	ITEM NO	DESC CODE	S.P. NO.				
	666	2012		REFL PAV MRK TY I (W) 4" (SLD)(100MIL) DOLLARS and CENTS	LF	6,715.000	152
	666	2036		REFL PAV MRK TY I (W) 8" (SLD)(100MIL) DOLLARS and CENTS	LF	8,388.000	153
	666	2042		REFL PAV MRK TY I (W) 12"(SLD)(100MIL) DOLLARS and CENTS	LF	1,456.000	154
	666	2048		REFL PAV MRK TY I (W) 24"(SLD)(100MIL) DOLLARS and CENTS	LF	311.000	155
	666	2054		REFL PAV MRK TY I (W) (ARROW) (100MIL) DOLLARS and CENTS	EA	16.000	156
	666	2093		REFL PAV MRK TY I(W)(UTURN ARW)(100MIL) DOLLARS and CENTS	EA	4.000	157
	666	2096		REFL PAV MRK TY I (W) (WORD) (100MIL) DOLLARS and CENTS	EA	20.000	158
	666	2102		REF PAV MRK TY I(W)36"(YLD TRI)(100MIL) DOLLARS and CENTS	EA	4.000	159
	666	2111		REFL PAV MRK TY I (Y) 4" (SLD)(100MIL) DOLLARS and CENTS	LF	41,584.000	160
	666	2126		REFL PAV MRK TY I (Y) 12"(SLD)(100MIL) DOLLARS and CENTS	LF	1,909.000	161

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	ITEM NO	DESC CODE	S.P. NO.				
	666	2142		REF PAV MRK TY II (W) 4" (BRK) DOLLARS and CENTS	LF	8,030.000	162
	666	2145		REF PAV MRK TY II (W) 4" (SLD) DOLLARS and CENTS	LF	6,715.000	163
	666	2153		REF PAV MRK TY II (W) 8" (SLD) DOLLARS and CENTS	LF	8,233.000	164
	666	2155		REF PAV MRK TY II (W) 12" (SLD) DOLLARS and CENTS	LF	1,456.000	165
	666	2157		REF PAV MRK TY II (W) 24" (SLD) DOLLARS and CENTS	LF	311.000	166
	666	2160		REF PAV MRK TY II (W) (ARROW) DOLLARS and CENTS	EA	16.000	167
	666	2172		REF PAV MRK TY II (W) (UTURN ARROW) DOLLARS and CENTS	EA	4.000	168
	666	2173		REF PAV MRK TY II (W) (WORD) DOLLARS and CENTS	EA	20.000	169
	666	2175		REF PAV MRK TY II (W) 36" (YLD TRI) DOLLARS and CENTS	EA	4.000	170
	666	2178		REF PAV MRK TY II (Y) 4" (SLD) DOLLARS and CENTS	LF	41,584.000	171
	666	2183		REF PAV MRK TY II (Y) 12" (SLD) DOLLARS and CENTS	LF	1,909.000	172

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	ITEM NO	DESC CODE	S.P. NO.				
	672	2012	034	REFL PAV MRKR TY I-C DOLLARS and CENTS	EA	108.000	173
	672	2015	034	REFL PAV MRKR TY II-A-A DOLLARS and CENTS	EA	195.000	174
	672	2017	034	REFL PAV MRKR TY II-C-R DOLLARS and CENTS	EA	570.000	175
	672	2024	034	TRAFFIC BUTTON TY W DOLLARS and CENTS	EA	984.000	176
	672	2025	034	TRAFFIC BUTTON TY Y DOLLARS and CENTS	EA	320.000	177
	677	2001		ELIM EXT PAV MRK & MRKS (4") DOLLARS and CENTS	LF	1,000.000	178
	677	2007		ELIM EXT PAV MRK & MRKS (24") DOLLARS and CENTS	LF	400.000	179
	677	2036		ELIM EXT PAV MRK & MRKS (METHOD A) DOLLARS and CENTS	SY	13,307.000	180
	680	2003		INSTALL HWY TRF SIG (SYSTEM) DOLLARS and CENTS	EA	1.000	181
	682	2001	003	BACK PLATE (12 IN) (3 SEC) DOLLARS and CENTS	EA	14.000	182
	682	2003	003	BACK PLATE (12 IN) (5 SEC) DOLLARS and CENTS	EA	2.000	183

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	682	2022	003	VEH SIG SEC (12 IN) LED (GRN ARW) DOLLARS and CENTS	EA	2.000	184
	682	2023	003	VEH SIG SEC (12 IN) LED (GRN) DOLLARS and CENTS	EA	16.000	185
	682	2024	003	VEH SIG SEC (12 IN) LED (YEL ARW) DOLLARS and CENTS	EA	2.000	186
	682	2025	003	VEH SIG SEC (12 IN) LED (YEL) DOLLARS and CENTS	EA	16.000	187
	682	2027	003	VEH SIG SEC (12 IN) LED (RED) DOLLARS and CENTS	EA	16.000	188
	682	2066	003	PED SIG SEC (12 IN) LED (COUNTDOWN) DOLLARS and CENTS	EA	12.000	189
	684	2028		TRF SIG CBL (TY A) (14 AWG) (2 CONDR) DOLLARS and CENTS	LF	7,424.000	190
	684	2031		TRF SIG CBL (TY A) (14 AWG) (5 CONDR) DOLLARS and CENTS	LF	9,848.000	191
	684	2033		TRF SIG CBL (TY A) (14 AWG) (7 CONDR) DOLLARS and CENTS	LF	1,113.000	192
	684	2049		TRF SIG CBL (TY A) (16 AWG) (3 CONDR) DOLLARS and CENTS	LF	4,464.000	193
	686	2017		INS TRF SIG PL AM(S) STR (TY D) DOLLARS and CENTS	EA	2.000	194

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	686	2037		INS TRF SIG PL AM(S) 1 ARM (36') LUM DOLLARS and CENTS	EA	1.000	195
	686	2045		INS TRF SIG PL AM(S) 1 ARM (44') LUM DOLLARS and CENTS	EA	1.000	196
	686	2145		INS TRF SIG PL AM(S) 2 ARM (40-36')LUM DOLLARS and CENTS	EA	1.000	197
	686	2165		INS TRF SIG PL AM(S) 2 ARM (44-36')LUM DOLLARS and CENTS	EA	1.000	198
	687	2001	004	PED POLE ASSEMBLY DOLLARS and CENTS	EA	10.000	199
	690	2024	009	REMOVAL OF SIGNAL HEAD ASSM DOLLARS and CENTS	EA	2.000	200
	690	2051	009	REMOVAL OF SIGNAL POLE ASSM DOLLARS and CENTS	EA	1.000	201
	1122	2002	001	ROCK FILTER DAMS (INSTALL) (TY 2) DOLLARS and CENTS	LF	540.000	202
	1122	2009	001	ROCK FILTER DAMS (REMOVE) DOLLARS and CENTS	LF	540.000	203
	1122	2016	001	CONSTRUCTION EXITS (INSTALL) (TY 1) DOLLARS and CENTS	SY	1,112.000	204
	1122	2019	001	CONSTRUCTION EXITS (REMOVE) DOLLARS and CENTS	SY	1,112.000	205

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	1122	2024	001	BACKHOE WORK (EROSION & SEDM CONT) DOLLARS and CENTS	HR	300.000	206
	1122	2037	001	TEMPORARY SEDIMENT CONTROL FENCE INSTLL DOLLARS and CENTS	LF	6,230.000	207
	1122	2057	001	TEMPORARY SEDIMENT CONTROL FENCE REMOVE DOLLARS and CENTS	LF	6,230.000	208
	2163	2001		WTR(CASE PIPE,JK, BOR OR TUN)(STL)(24") DOLLARS and CENTS	LF	95.000	209
	2163	2002		TRENCH EXCAVATION PROTECTION DOLLARS and CENTS	LF	3,368.000	210
	2163	2003		PIPE (6 IN) (DUCTILE IRON) (WATER) DOLLARS and CENTS	LF	237.000	211
	2163	2004		PIPE (8 IN) (C900 DR 14 PVC) (WATER) DOLLARS and CENTS	LF	92.000	212
	2163	2005		PIPE (12 IN) (C900 DR 14 PVC) (WATER) DOLLARS and CENTS	LF	214.000	213
	2163	2006		PIPE (16 IN) (C905 DR 18 PVC) (WATER) DOLLARS and CENTS	LF	2,920.000	214
	2163	2007		DUCTILE IRON FITTINGS (WATER) DOLLARS and CENTS	TON	2.780	215

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	2163	2008		WTR (GATE VALVE & BOX)(COMPL)(6 IN) DOLLARS and CENTS	EA	7.000	216
	2163	2009		WTR (GATE VALVE & BOX)(COMPL)(12 IN) DOLLARS and CENTS	EA	2.000	217
	2163	2010		WTR (GATE VALVE & BOX)(COMPL)(16 IN) DOLLARS and CENTS	EA	4.000	218
	2163	2011		COMBO AIR & VACUUM RELEASE VALVE (1 IN) DOLLARS and CENTS	EA	1.000	219
	2163	2012		FIRE HYDRANT DOLLARS and CENTS	EA	7.000	220
	2163	2013		WTR (TIE IN) (COMPL) (8 IN) DOLLARS and CENTS	EA	2.000	221
	2163	2014		WTR (TIE IN) (COMPL) (12 IN) DOLLARS and CENTS	EA	4.000	222
	2163	2015		COMBO AIR & VACUUM RELEASE VALVE (3 IN) DOLLARS and CENTS	EA	1.000	223
	2163	2016		FIRE HYDRANT BARREL EXTENSION DOLLARS and CENTS	LF	10.000	224
	2163	2017		RELOC WTR MTR, VALVE & APPURT (COMPL) DOLLARS and CENTS	EA	1.000	225

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	3268	2010		D-GR HMA TY-B PG70-22 DOLLARS and CENTS	TON	5,543.000	226
	3268	2027		D-GR HMA TY-C SAC-B PG70-22 DOLLARS and CENTS	TON	3,494.000	227
	3268	2028		D-GR HMA TY-C PG70-22 DOLLARS and CENTS	TON	4,024.000	228
	6266	2005	017	VIVDS COMMUNICATION CABLE (COAXIAL) DOLLARS and CENTS	LF	4,464.000	229
	6834	2001	002	PORTABLE CHANGEABLE MESSAGE SIGN DOLLARS and CENTS	DAY	121.000	230
	8821	2008	004	RVSD ASSEM (SOLAR POWER) DOLLARS and CENTS	EA	2.000	231
	8835	2001		ACCESSIBLE PEDESTRIAN SIGNAL UNITS DOLLARS and CENTS	EA	14.000	232
	8961	2001		REMOVE EXISTING CCTV FIELD EQUIP-MENT DOLLARS and CENTS	EA	1.000	233
	8961	2002		RELOCATE EXISTING CCTV FIELD EQUIP-MENT DOLLARS and CENTS	EA	1.000	234
	8962	2001		CELLULAR DIGITAL MODEM DOLLARS and CENTS	EA	1.000	235

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	8963	2001		SPREAD SPECTRUM RADIO (INSTALL) DOLLARS and CENTS	EA	2.000	236
	8963	2002		ANTENNA (UNI-DIRECTIONAL) (INSTALL) DOLLARS and CENTS	EA	2.000	237
	8963	2003		COAXIAL CABLE (INSTALL) DOLLARS and CENTS	LF	50.000	238

GENERAL NOTES

Basis of Estimate

Item	Description	**Rate	Basis	Quantity
160	**Topsoil**	1 CY/7 SY	9,998 CY	69,919 SY
164	**Seed for Erosion Control**			
	CELL FBR MULCH SEED (PERM)(URBAN)(CLAY)	4840 SY/AC	14.45 AC	69,919 SY
**166	**Fertilizer (13-13-13)**	1/8 LB/SY	69,919 SY	8,740 LB
168	**Vegetative Watering**			
	(Item 168)(Perm)	20 GAL/SY	69,919 SY	1,398 MG
	(Item 168)(Temp)	10 GAL/SY	69,919 SY	700 MG
**204	**Sprinkling**			
	(Dust)	30 GAL/CY		
	(Item 132)	30 GAL/CY		
	(Item 247)	30 GAL/CY		
**210	**Roll (Flat Wheel)**			
	(Item 247)	1 HR/200 TON		
**210	**Roll (Tamping)**			
	(Item 132)	1 HR/200 CY		
**210	**Roll (Heavy Tamp)**			
	(Item 132)	1 HR/200 CY		
**210	**Roll (Lt Pneu Tire)**			
	(Item 132)	1 HR/500 CY		
	(Item 247)	1 HR/200 TON		
247	**FL BS (CMP IN PLC)**			
	(TY D GR 5)(FNAL POS)	27 CF/CY	424,494 CF	15,722 CY
260	**Lime** (Hydrated Lime Slurry)			
	LIME TRT (EXST MATL) (8")	0.0240 TON/SY	31,319 SY	752 TON
310	**Prime Coat (MC-30 or AE-P)**			
		0.30 GAL/SY	21,170 SY	6,351 GAL
3268	**Dense-Graded Hot-Mix Asphalt (QC/QA)**			
	TY-B PG 70-22 (3 IN)	110 LB/SY/IN	33,594 SY	5,543 TON
	TY-C PG 70-22 (SAC-B) (2 IN)	110 LB/SY/IN	31,764 SY	3,494 TON
	TY-C PG 70-22 (2 IN)	110 LB/SY/IN	36,582 SY	4,024 TON

** For Informational Purposes Only

The following standard detail sheet or sheets have been modified:

Modified Standards
CURB INLET (SPECIAL)
BB-B40 (MOD) – (3 sheets)

GENERAL

References to manufacturer's trade name or catalog numbers are for the purpose of identification only. Similar materials from other manufacturers are permitted if they are of equal quality, comply with the specifications for this project, and are approved.

Do not place surface treatments or pavement when in the Engineer's professional judgment, the apparent general weather conditions are unsuitable for Overlay operations.

Remove and replace, at the Contractor's expense, and as directed, all defective work, which was caused by the Contractor's workforce, materials, or equipment.

Perform work during good weather unless otherwise directed. If work is performed at Contractor's option, when inclement weather is impending, and the work is damaged by subsequent precipitation, the Contractor is responsible for all costs associated with replacing the work, if required.

Accrue contract time charges through the Contractor's completion of the final punchlist.

Meet weekly with the Engineer to notify him/her of planned work for the upcoming week. Provide a three-week "look ahead schedule," as well as all work performed over the past week.

Blade the side slopes to remove all grass from the area of construction before placing flexible base on that portion of the roadway to be widened, leveled-up, seal coated/surfaced treated, or Hot Mix Asphaltic Concrete Pavement (HMACP) overlaid. Blade the sod back onto the side slopes after the proposed items of work have been completed. Consider subsidiary to pertinent Items.

Equip all construction equipment used in roadway work with a permanently mounted 360° revolving or strobe warning light with amber lens. Light will have a minimum lens height and diameter of 5 inches and mounting height of not less than 6 feet above the roadway surface and be visible from all sides. Attach at each side of the rear end of the construction equipment an approved orange warning flag mounted not less than 6 feet above the roadway surface.

Overhead and underground utilities may exist in the vicinity of the project. The exact location of underground utilities is not known.

If working near power lines, comply with the appropriate sections of Local Legal Requirements, Texas State Law, and Federal Regulations relating to the type of work involved.

A high value AT&T Toll Fiber Optic line exists just inside the IH 35 SBFR ROW line (west boundary). The estimated location of this line via surface means is shown on the plans and is not shown to be in conflict with the proposed work. Prior to work in the vicinity of this fiber optic line, notify the appropriate AT&T Toll Fiber representative as directed by the Engineer.

In the event of unforeseen utility adjustment, the Contractor will prosecute their work in such a manner and sequence as to facilitate the adjustments to be made.

Be aware that an Intelligent Transportation Systems (ITS) Infrastructure exists within the limits of this project and that the system must remain operational throughout construction. The exact location of ITS Infrastructure is not known. Contact the TxDOT Area Engineer's or Inspection Team's Office for the location(s) at least 48 hours before commencing any work that might affect present ITS Infrastructure Use caution if working in these areas to avoid damaging or interfering with existing facilities. Repair any damage to this system within 8 hours of occurrence at no cost to the Department. In the event of system damage, notify TxDOT/CTECC at (512) 974-0883 within one hour of occurrence. Failure of the Contractor to repair damage to any infrastructure that conveys any corridor information to TxDOT/CTECC will result in the Contractor being billed for the full cost of emergency repairs.

Superelevate all curves to conform to the slope(s) of the existing curves, as directed. Consider subsidiary to the pertinent Items.

Match existing cross slopes, as directed. Consider subsidiary to the pertinent Items.

Provide a smooth, clean sawcut along the existing asphalt and concrete pavement structure, as directed. Consider subsidiary to the pertinent Items.

Remove all construction debris and surplus material generated by the construction work within the project limits. Perform this work as directed. Consider subsidiary to the pertinent Items.

Trim vegetation around signs and other obstructions. Consider subsidiary to pertinent Items.

Supply litter barrels in enough numbers at locations as directed to control litter within the project. Consider subsidiary to pertinent Items.

Use a self-contained vacuum broom to sweep the roadway and keep it free of sediment due to the Construction of the Roadway, as directed. Consider subsidiary to pertinent Items.

Protect all areas of the right of way, which are not included in the actual limits of the proposed construction areas from destruction. Exercise care to prevent damage to trees, vegetation, and other natural surroundings. Areas not to be disturbed will be as directed. Restore any area disturbed because of the Contractor’s operations to a condition as good as, or better than, before the beginning of work.

Damage to existing pipes and SET’s due to Contractor operations shall be repaired at Contractor’s expense.

All locations used for storing construction equipment, materials, and stockpiles of any type, within the right of way, will be as directed. Use of right of way for these purposes will be restricted to those locations where driver sight distance to businesses and side street intersections is not obstructed and at other locations where an unsightly appearance will not exist. The Contractor will not have exclusive use of right of way but will cooperate in the use of the right of way with the city/county and various public utility companies as required.

The Project Superintendent will be capable of speaking English and will be available on the project at all times when work is being performed, including subcontractor work. The Superintendent will be available and on-call 24 hours a day.

Measure all minimum vertical clearances for all structures (including, but not limited to, signal mast arms, span wires, and overhead sign bridge structures) within the limits of the project for all roadway alignments in all directions of travel. Coordinate with the Engineer to take these measurements and obtain prior to opening roadways to traffic unless otherwise approved. The Engineer will report all minimum vertical clearance information to the District Permit Office.

Furnish, to the Engineer, a list of the final centerline elevations.

During evacuation periods for Hurricane events the Contractor will cooperate with Department for the restricting of Lane Closures and arranging for Traffic Control to facilitate Coastal Evacuation Efforts. In addition, the Contractor's assistance may be requested outside of the Project Limits.

When directed, designate an official backer/spotter or "dump-man" who shall wear specially marked clothing and a specially marked hard hat which specifically identifies them as the backer/spotter and identifies that they are the person who is directing the backing operations. They shall be identified to all project personnel, Contractor and TxDOT, when dumping the various project materials, throughout the course of the project.

Storm Water Pollution Prevention Plan (SW3P) notes
Transport any soils contaminated during construction off of the proposed project, away from the site, and properly dispose of off-site.

Collect wastewater generated on-site by chemical toilets, transport and dispose of off-site, in a proper manner.

For all work over or near Bodies of Water (Lakes, Rivers, Ponds, Creeks, etc.):
Keep on hand Synthetic Absorbent Booms (Petroleum Sorbent Booms, Petroleum Socks, Absorbant Socks, etc.) and Absorbent Pads (Eversoak Sorbents, Industrial Absorbent Pads, Calicorp Absorbent Pads, etc.), both types, for spilled petroleum products, in enough quantity to mitigate a petroleum-type spill due to Contract work.

ITEM 4 – SCOPE OF WORK

Final clean up will include the removal of excess material considered detrimental to vegetation growth along the front slope of the ditch. Materials such as surface aggregates and other materials as specified by the Engineer will be removed at the Contractor’s expense.

ITEM 5 – CONTROL OF THE WORK

In the event utility lines needing unforeseen adjustments are encountered during construction operations, alter operations and continue to prosecute the contract in such a manner that will allow utility adjustments to be made by others. An extension of working time may be granted for any delays caused by the utility adjustments if deemed necessary.

Before Contract letting, bidders may obtain from the Engineer's office, the earthwork information. If copies of the actual cross-sections (paper copies) are requested, they will be available at the Engineer's office for borrowing by copying companies for the purpose of making copies for the bidder, at the bidder's expense. In addition, cross-sections will be available in electronic format, upon request, at no cost to the bidder.

GEOPAK earthwork output listings for this project are available upon request, on diskettes or CD ROM's, at the Area Engineer's office.

Mark and maintain 100-foot station intervals for the duration of the project, as directed. Consider subsidiary to pertinent Items.

Electronic Shop Drawing Submittals:
Submit Electronic Shop Drawing Submittals according to the current **Guide to Electronic Shop Drawing Submittal (GESDS).** For instructions on submitting shop drawings electronically go to TxDOT website (Business with TxDOT > Bridge Information > Shop Drawings. File is titled: **Guide to Electronic Shop Drawing Submittal.**)

For information on the electronic shop plan process, please visit the Bridge Division/Fabrication Branch web pages at:
http://www.txdot.gov/business/contractors_consultants/bridge/shop_drawings.htm

The Guide to Electronic Shop Drawing Submittal at:
ftp://ftp.dot.state.tx.us/pub/txdot-info/library/pubs/bus/bridge/e_submit_guide.pdf
and the Submittal Requirements table at:
ftp://ftp.dot.state.tx.us/pub/txdot-info/library/pubs/bus/bridge/electronic_submission.pdf
have been updated to include additional guidance on segmental bridge submittals.

And

Copies of the standard shop drawings are on file with Traffic Operations Division, Bridge Division, and the Materials Section of Construction Division. Additional shop drawings for roadway illumination assemblies built in conformance with these drawings are not required. Pre-approved shop drawing manufacturers and assembly model numbers can be found at TxDOT website (Business with TxDOT > Materials Information > Material Producer List. Category is Roadway Illumination and Electrical Supplies

1. **In the E-mail "To:" box place the E-mail address to the following:**

Submit all Shop Drawings (and Working Drawings, if/when required), which do not require direct submittal to the **Bridge Division Fabrication Section**, electronically, to the following address:

South Travis Area	David Klipple	David.Klipple@txdot.gov	AUS_SA-ShopReview@txdot.gov

Consultant E-Mail Contacts: **Paul Schrader: pschrader@cpvi.com**
Tom Stephenson: tstephenson@cpvi.com

2. In the e-mail "CC:" or "Copy To:" box place the following E-mail addresses:

In every e-mail submittal, the "CC:" or "Copy To:" line of the header will include the following e-mail addresses:

a. Contractor's Contact:

AND

b. Area Office Contact:

South Travis Area	David Klipple	David.Klipple@txdot.gov	AUS_SA-ShopReview@txdot.gov

ITEM 6 - CONTROL OF MATERIALS

Article 6.5

Give a minimum of 24 hours notice for materials, which require inspection at the plant.

ITEM 7 – LEGAL RELATIONS AND RESPONSIBILITIES

Article 7.19

Do not initiate activities in a Project Specific Location (PSL) associated with a U.S. Army Corps of Engineers (USACE) jurisdictional area that have not been previously evaluated by the USACE as part of the permit review of this project. Such activities include, but are not limited to, haul roads, equipment staging areas, borrow and disposal sites. Associated defined here means materials are delivered to or from the PSL. The jurisdictional area includes all waters of the U.S. including wetlands or associated wetlands affected by activities associated with this project. Special restrictions may be required for such work. Consult with the USACE regarding activities, including Project Specific Locations (PSLs) that have not been previously evaluated by the USACE. Provide the Department with a copy of all consultations or approvals from the USACE before initiating activities.

Proceed with activities in PSLs that do not affect a USACE jurisdictional area if a self-determination has been made that the PSL is non-jurisdictional or proper USACE clearances have been obtained in jurisdictional areas or have been previously evaluated by the USACE as part of the permit review of this project. Document any determinations that their activities do not affect a USACE jurisdictional area. Maintain copies of their determinations for review by the Department or any regulatory agency.

The Contractor must document and coordinate with the USACE, if required, before any excavation hauled from or embankment hauled into a USACE jurisdictional area by either (1) or (2) below.

(1) Restricted Use of Materials for the Previously Evaluated Permit Areas. Document both the project specific location (PSL) and their authorization. Maintain copies for review by the Department or any regulatory agency. When an area within the project limits has been evaluated by the USACE as part of the permit process for this project:

a. Suitable excavation of required material in the areas shown on the plans and cross sections as specified in Item 110, Excavation, is used for permanent or temporary fill (Item 132, Embankment) within a USACE jurisdictional area;
b. Suitable embankment (Item 132) from within the USACE jurisdictional area is used as fill within a USACE evaluated area; and,
c. Unsuitable excavation or excess excavation ["Waste"] (Item 110, Excavation) that is disposed of at an approved location within a USACE evaluated area.

(2) Contractor Materials from Areas Other than Previously Evaluated Areas. Provide the Department with a copy of all USACE coordination or approvals before initiating any activities in a jurisdictional area within the project limits that has not been evaluated by the USACE or for any off right of way locations used for the following, but not limited to, haul roads, equipment staging areas, borrow and disposal sites:

a. Item 132, Embankment, used for temporary or permanent fill within a USACE jurisdictional area; and,
b. Unsuitable excavation or excess excavation ["Waste"] (Item 110, Excavation) that is disposed of outside a USACE evaluated area.

The total area estimated to be disturbed for this project is 40 acres. The disturbed area in this project, all project locations in the Contract, and the Contractor project specific locations (PSLs), within 1 mile of the project limits, for the Contract will further establish the authorization requirements for storm water discharges. The Department will obtain an authorization to discharge storm water from the Texas Commission on Environmental Quality (TCEQ) for the construction activities shown on the plans. The Contractor is to obtain required authorization from the TCEQ for Contractor PSLs for construction support activities on or off the ROW. When the total area disturbed in the Contract and PSLs within 1 mile of the project limits exceeds 5 acres, provide a copy of the Contractor NOI for PSLs on the ROW to the Engineer and to the local government that operates a separate storm sewer system.

This project required formal consultation, permits, or both with environmental resource agencies. Environmentally sensitive areas will most likely be encountered on Contractor designated PSLs for this project.

TxDOT has assumed a U.S. Army Corps of Engineers' (USACE) Nationwide Permit #14 (NWP #14) for this project. This allows a maximum of $^{1}/_{10}$ of an acre of permanent fill to be placed within the creek channel. If more than $^{1}/_{10}$ of an acre will need to be filled, a pre-construction notice will need to be completed and mailed to the USACE or an additional permit will need to be obtained, by the Contractor, prior to construction. If temporary access roads will be needed, adhered to the requirement of NWP #14 and restore all disturbed areas be to their original contours, once construction is complete.

A project that requires a USACE permit must use at least one of the Best Management Practices (BMP) from each category listed on the Texas Commission on Environmental Quality (TCEQ) Section 401 checklist for NWP's. The erosion control BMP for this project would be blankets/matting. The post construction total suspended solid control BMP for this project

would be vegetative filter strips. The sedimentation control BMP for this project would be silt fences and rock berms.

Do not park equipment or make stockpiles where driver sight distance to businesses and side street intersections is obstructed, especially after work hours. If it is necessary to park where drivers' views are blocked, make every effort to flag traffic accordingly. Give the travelling public first priority.

Maintain positive drainage for permanent, as well as, temporary drainage for the duration of the project. This work is the sole responsibility of the Contractor. Construct temporary and permanent drainage systems prior to the placement of temporary pavement, when possible, but absolutely prior to the placement of permanent pavement. Be responsible for any items associated with the temporary/interim drainage and all related maintenance. No direct payment will be made for this work. The Engineer will have the final authority in determining the adequacy of any temporary/permanent drainage features installed.

Migratory Birds
The Contractor's attention is directed to the fact that there is the possibility that migratory birds may be nesting within the project limits. Migratory bird nesting activity can be concentrated on roadway structures such as bridges and culverts. Remove all old migratory bird nests from any structures between September 1 and January 31, and while the nests are not occupied or being used by migratory birds. In addition, be prepared to prevent migratory birds from re-nesting between February 1 and August 31.

All methods used for the removal of old bird nests and the prevention of re-nesting must be approved by the Engineer, well in advance of the planned use.

In the event that any active nest of a migratory bird species is encountered on-site during project construction, all construction activity within the immediate vicinity of the nest will cease immediately. Contact the Engineer to determine how to proceed.

No blasting on this project, unless otherwise allowed.

ITEM 8 – PROSECUTION AND PROGRESS
Article 8.3
Working days will be computed and charged in accordance with Article 8.3.A.1 Five-Day Workweek.

Article 8.3C
Work is allowed to be performed during the nighttime, with prior approval.

Article 8.11
In accordance with Article 8.11.B in Special Provision 008-069, disincentive for failure to substantially complete the work within the allotted time will be applied.

The road-user cost liquidated damages for Milestone 1 is $10,000 per day.

Substantially complete Milestone 1 in 6 calendar days.

The time charges for Milestone 1 will begin upon the date construction begins on Phase 1, Step 3 per the Traffic Control Plans and the day traffic is switched to the Detour 3 configuration. The start date for Milestone 1 shall be a Friday night at 8:00 pm.
The time charges for Milestone 1 will end upon substantial completion of work in Phase 1, Step 4 per the Traffic Control Plans and the day traffic is switched from the configuration in Detour 4 to the configuration shown in Phase 2 of the Traffic Control Plans. The end date for Milestone 1 shall be the Wednesday immediately following the Friday that time charges began for Milestone 1.

The daily incentive rate for substantial completion of Milestone 1 is $5,000.
The maximum number of calendar days for computing the Milestone 1 incentive credit is 3 days.

The following utilities cannot be adjusted until the "PEC/TWC/Grande Joint Ductbank" on plan sheets 421-426 has been constructed and opened for use:

- Pedernales Electric, contact Gordon Whitelock, 512-644-2193, gordon.whitelock@peci.com
- Grande Communications, contact Charles Ross, 512-220-3313
- Time Warner Cable, contact Pete Navejas, 512-748-1601, pete.navejas@twcable.com

The utility owners have agreed to make adjustments within 90 calendar days after being notified the ductbank is operational. The sequence of work shall allow the completion of portions of the work not in conflict with the above utilities to proceed during the 90 days allowed the utility companies for completion of their relocations.

LANE RENTALS

The Contractor will be assessed a lane rental charge for each Freeway main lane or exist ramp closed or obstructed after 5:00 A.M. and/or before 8:00 P.M. on allowed work days from Notice to Proceed until Project Completion. The Department will use the time as displayed by the cellular phone service provider on the Department issued cell phones. The schedule of lane rentals rates will be as follows:

IH 35 MAIN LANE & EXIT RAMP RENTAL RATES

Lane Rental Period	Rental Rate for Thru Lane or Exit Ramp Closure (per lane)
0-30 minutes	$4,000
30-60 minutes	$8,000
Every additional 0-30 minute interval after 1 hour	$5,000
Note: Late charges are cumulative. **Example: Contractor fails to have 1 thru lane re-opened to traffic until 6:20 AM; Assessed lane rental charge would be $30,000.**	

Situations resulting from conditions not controlled by the contractor causing lost time (i.e. natural disasters, unusually severe weather, etc.) will not be subject to lane rental charges when the overlap occurs after the lane closure has been set.

Waiver of lane rental charges, due to conditions not controlled by the Contractor, will only be considered when the Contractor fails to re-open the lane(s) within thirty (30) minutes or the time allowed by the Engineer at the onset of discovery of these conditions.

Closures will be allowed during the times stated for the above purposes provided that the Contractor has fully implemented the approved Traffic Control Plan (TCP) and obtained the approval of the Engineer.

A Critical Path Method (CPM) schedule will be required for this project.

Provide a virus-free computer disk or diskette containing the Primavera Construction Schedule.

Failure to complete work within the seal coat season established by the plans will result in liquidated damages as described in Section 8.5, "Failure to Complete Work on Time." This includes any surface treatment work carried over to the next year.

The Engineer may consider extending working days beyond the end of the seal coat season.

ITEM 9 – MEASUREMENT AND PAYMENT
Provide full-time, off-duty, uniformed, certified peace officers in officially marked vehicles, as part of traffic control operations, as directed.

Show proof of certification by the Texas Commission on Law Enforcement Standards.

No payment will be made for peace officers unless the Contractor completes the proper Department tracking form. Submit invoices that agree with the tracking form for payment at the end of each month, when approved services were provided. Request the tracking form from the Department.

No payment for officers used for moving equipment without prior written approval.

Cancel "Off-Duty" Peace Officers and their Motor Vehicle Units when the Scheduled lane closures are canceled. Failure to cancel the Off Duty Officers and their respective Motor Vehicle Units will not be cause for payment, by TxDOT, for "Show Up" time.

ITEM 100, 132 & 160 - PREP ROW, EMBANKMENT, & TOPSOIL
Do not burn brush, unless otherwise approved.

Use hand methods or other means to remove objectionable material and obstructions, if doing work by mechanical methods is impractical. Consider subsidiary to the pertinent Items.

ITEM 100 - PREPARING RIGHT OF WAY

Treat cuts on trees with an approved tree wound dressing within 20 minutes of making a pruning cut or otherwise causing damage to the tree, as directed. Consider subsidiary to the pertinent Items.

ITEM 110 & 132 – EXCAVATION & EMBANKMENT

At no time will the retaining wall backfill material exceed the adjacent embankment operation by more than one embankment lift. At no time will the embankment adjacent to the retaining wall backfill exceed the wall backfill by any elevation.

Unsuitable material encountered in a cut or fill section will be considered waste. The Engineer will define unsuitable material. Material, which the Contractor might deem to be unsatisfactory or unsuitable, due to moisture content, will not be considered unsuitable material, unless otherwise approved.

Obtain approval of all compaction equipment prior to all backfilling and embankment operations.

ITEM 132 - EMBANKMENT

Ty "C" Embankment must meet the following material requirements, when used as select fill.

"Select" Embankment Material Requirements

Item	Description	(Percent Retained-Sieve)						PI Max	PI Min
		2"	1 ¾"	7/8"	3/8"	#4	#40		
132	Embankment (TY C)	0	0-10	-	-	45-75	50-85	20	6

Embankment within two feet of the pavement base course should not contain sulfate contents greater than 3000 ppm, if the embankment will be treated with lime.

The Engineer must approve the embankment material before use on the project.

Stockpile TY C embankment at an approved location until it meets all testing requirements. The stockpile must be between 500 CY and 5000 CY and must not exceed a height of 15 FT. Provide a test report from a Department-approved lab prior to requesting the Department to test the stockpile.

If any embankment will be treated with lime, then embankment within two feet of the pavement base course should not contain sulfate contents greater than 3000 ppm and be less than 40 PI.

Work to correct unstable material (e.g. dry, wet, loose, etc.) to a depth of 6" below existing subgrade elevation, prior to beginning any embankment placement. Consider subsidiary to the various bid Items. Any work to correct unstable material below the 6" depth, below existing subgrade elevation, will be paid as extra work. However, there will be no payment to correct failures, in the subgrade areas, that were constructed under this contract.

Track ALL embankment slopes left idle for more than 14 days, within or at the end of the 14-day idle period, to prevent erosion. Tracking consists of operating a tracked vehicle or equipment up and down the slope, leaving track marks perpendicular to the direction of the slope. Retrack slopes after rain event, as directed. Consider tracking of slopes to prevent erosion as subsidiary to the pertinent Items.

Correct subgrade (e.g. unstable areas, soft spots, etc.) prior to the dumping of Flexbase or HMACP. Consider subsidiary to the pertinent Items.

Scarify and re-compact existing asphaltic/base sections, which are not called out to be removed in fill sections, where the bottom of the proposed pavement structure is higher than and over the top of the existing asphalt surface, in order to reduce the possibility of a slip plane.

For embankments that are thicker than 5 feet in depth, project excavation can be used in the lifts up to 5 feet below the calculated subgrade crown, unless near a backwall or other structure, as directed.

ITEM 160 - TOPSOIL

Obtain approval of all topsoil sources before digging begins. Ensure off-site topsoil has a minimum PI of 25, or as directed. Ensure that the topsoil placed is similar to the topsoil that is within the project. To the extent possible, obtain as much of the topsoil from within the project site, or as directed. TxDOT reserves the right to take samples, as needed, to assure that the material meets the PI and other requirements as indicated in the Specifications (Fertility, Organics, Erodability, etc.).

No Sandy Loam allowed, unless the project dictates otherwise.

Obtain approval of the actual depth of the topsoil sources for both on-site and off-site sources.

Construct topsoil stockpiles of no more than five (5) feet in height.

It is permissible to use topsoil dikes for erosion control berms within the right of way.

Track ALL topsoiled slopes left idle for more than 14 days, within or at the end of the 14-day idle period, to prevent erosion. Tracking consists of operating a tracked vehicle or equipment up and down the slope, leaving track marks perpendicular to the direction of the slope. Retrack slopes after rain event, as directed. Consider the tracking of slopes to prevent erosion as subsidiary to the pertinent Items.

Upon final grading, immediately track all topsoiled slopes to prevent erosion, prior to seeding operations, as directed. Consider subsidiary to the pertinent Items.

Provide measurements for payment of topsoil quantities before seeding. Consider subsidiary to the pertinent Items.

Place Topsoil in accordance with the SW3P, in phases, as partial completion of the roadway is obtained.

ITEM 164 – SEEDING FOR EROSION CONTROL
Obtain vegetation establishment of all seeded areas, including adequate coverage, prior to "Final Acceptance." If all other work is complete, time charges may be suspended, until adequate coverage is established.

Do not use ryegrass for temporary cover.

Reseed all areas with "little or no" grass growth after 1 month from the last seeding date, as directed. Consider subsidiary to the various bid items.

Provide measurements for payment of seeding for erosion control quantities before seeding. Consider subsidiary to the pertinent Items.

ITEM 166 – FERTILIZER
Use 13-13-13 fertilizer analysis, unless otherwise directed. Take soil samples, as directed, to determine the actual soil needs for fertilizer. Consider this work subsidiary to pertinent Items.

ITEM 168 – VEGETATIVE WATERING
Water all areas of project to be seeded or sodded.

Maintain the seedbed in a condition favorable for the growth of grass. Watering can be postponed immediately after a rainfall on the site of ½ inch or greater, but will be resumed before the soil dries out. Continue watering until final acceptance.

Vegetative watering rates and quantities are based on ¼ inch of watering per week over a 3-month watering cycle. The actual rates used and paid for will be as directed and will be based on prevailing weather conditions to maintain the seedbed.

Obtain water at a source that is metered (furnish a current certification of the meter being used) or furnish the manufacturer's specifications showing the tank capacity for each truck used. Notify the Engineer, each day that watering takes place, before watering, so that meter readings or truck counts can be verified.

ITEM 169 – SOIL RETENTION BLANKETS
Provide machined mat of curled wood excelsior of 80%, six-inch or longer fibers. The top of each blanket is covered with a photodegradable extruded plastic mesh. For the weight requirements, (lbs/sq yd), of the matting see DMS 6370, typical roll width = 48 or 96 inches; typical roll length = 90 feet. This soil retention blanket should meet the previous stated requirements, equal, or better as approved.

Use materials from prequalified material producers list as shown on the Texas Department of Transportation (TxDOT) ------ Construction Divisions (CST) materials producers list. See TxDOT website (www.txdot.gov/Business with TxDOT > Materials Information > Material

Producer List for list of pre-qualified manufacturers. Direct all questions to the Maintenance Division, Vegetation Management Section, 125 E. 11th Street, Austin, TX 78701-2483.

ITEM 204 - SPRINKLING
Apply water for dust control as directed. When dust control is not being maintained, cease operations until dust control is maintained. Consider subsidiary to the pertinent Items.

ITEM 216 – PROOF ROLLING
Correct and perform "Proof Rolling" retest at the Contractor's expense, to the satisfaction of the Engineer, when initial "Proof Rolling" yields a failing result.

ITEM 247 - FLEXIBLE BASE
Furnish Type D material.

Furnish flexible base meeting Grade 5 requirements.

The following table will govern the acceptance of compaction on base courses, when compacted in multiple courses. Compaction requirements are in percent of maximum dry density as determined by (Tex-113-E). When compacting in a single course, compact to at least 100% of maximum dry density as determined by Tex-113-E.

Item	Material	All Roadways	
		Lift	Min Density
247	FL BS (CMP IN PLC)	1	95%
		2	98%
		3 (final lift)	100%

Use Flex Base (CMP IN PL) (TY A GR 5) for driveways, minor streets, and other locations as directed.

Correct subgrade (e.g. unstable areas, soft spots, etc.) prior to the dumping of Flex Base. Consider subsidiary to the pertinent Items.

Roll shoulder base with a light pneumatic roller to prevent erosion.

Complete all subgrade, ditches, slopes, and place all drainage structures to conform to required lines, grades, and cross-sections, as shown and directed, prior to the placement of Flex Base.

For Flex Base placed over the box culverts, do not use a Vibratory Roller to compact the material.

ITEM 260 - LIME TREATMENT (ROAD-MIXED)
Apply Commercial Lime Slurry as directed or as indicated in the plans and specifications.

The Engineer will approve the project subgrade to ensure the proper application of lime.

Measure the sulfate content, in accordance to Tex-145-E, for subgrade soil to be treated.

If the sulfate content is less than or equal to 3000 ppm, apply, mix, and mellow the subgrade soil with lime slurry in accordance to the standard specification. Hydrated lime or lime slurry can be used when the sulfate content is below 3000 ppm.

If the sulfate content is greater than 3000 ppm., but less than or equal to 8000 ppm., perform the following after applying and mixing lime slurry into the subgrade:

- Apply an additional 4 percentage points of moisture above optimum moisture
- Mix in the additional moisture
- Allow the mixture to mellow at least 7 days

Use lime slurry when sulfate content is greater than 3000 ppm, but less than or equal to 8000 ppm.

If the sulfate content is greater than 8000 ppm, do not apply lime slurry and treat the subgrade soil in accordance with Item 265 as directed by the Engineer.

ITEM 300 – ASPHALTS, OILS, & EMULSIONS
Asphalt season starts April 1 and ends October 15.

ITEM 300 (NON-TRACKING TACK COAT)
Apply non-tracking tack coat at 0.12 GAL/SY (residual).

ITEM 310 – PRIME COAT
Apply blotter material to all driveways and intersections.

Any oil or asphaltic material being paid for on the project shall use tank strap method as shown in TxDOT Seal Coat and Surface Treatment Manual 2004-1.

ITEM 3268 (HMACP Testing)
The Contractor must sample asphalt binder, in accordance to the applicable item. Label the sample can with the corresponding CSJ, lot, and sublot numbers.

Samples must be stored in a common area where they are readily available to the TxDOT representative at the plant. The Contractor will be responsible for supplying storage for all samples. Retain all asphalt samples until hot mix production is complete or directed otherwise.

When directed, the Contractor is responsible for disposal of all asphalt binder samples, in accordance to Local, State, and Federal regulations.

[Hot Mix Asphaltic Conc (HMAC) Core Holes]
Refill and compact all HMAC core holes to the same elevation as the adjacent roadway. Use hot mix of the type being used in the project to fill core holes. As an alternative a high performance cold patching mix such as Rapid Cure Patching Mix meeting the requirements of DMS-9203 or

Medium Cure Patching mix made with SCM meeting requirements of DMS-9202. Consider this work subsidiary to the pertinent Items.

ITEM 3268 - DENSE-GRADED HOT-MIX ASPHALT

Perform work during good weather unless otherwise directed. If work is performed at Contractor's option, when inclement weather is impending, and the work is damaged by subsequent precipitation, the Contractor is responsible for all costs associated with replacing the work, if required.

Transition from the new ACP to existing surface tie-in by utilizing a required milled transition to a vertical butt joint. Make the transition a minimum of 50 feet H:1 inch V slope ratio of newly placed ACP. Make the temporary joint, at the tie-in, a minimum of a "3-paper-taper" longitudinally and covering the entire width. Sawcut existing pavement as directed. Prior to milling, core the existing pavement to determine its thickness. Do not proceed with milling until directed. Consider this work subsidiary to the pertinent Items.

Provide mixture Types B and C using PG binder 70-22.

Use aggregate meeting a Surface Aggregate Classification (SAC) requirement of "**B)**" for surface course mixtures.

All base or non-surface mixtures require SAC "B" aggregate, unless directed otherwise.

Aggregates used on shoulders and ramps are required to meet SAC requirements.

Target laboratory molded density is 96.5% for mixtures without recycled asphalt and 97% for mixtures with recycled asphalt for TGC mixture designs.

When using Superpave Gyratory Compactor (SGC) to design mixtures, submit the SGC mix design to the Engineer for approval.

When using substitute binders, mold specimens for mix design and production at the temperature required for the substitute binder used to produce the HMA.

The Engineer will provide the mix design.

All mixtures must meet the Hamburg requirement as stated in the table below.

High-Temperature Binder Grade	Test Method	Hamburg Wheel Test Requirements [1]		
		Minimum # of Passes	Maximum Rut Depth (mm) [2]	Minimum Rut Depth (mm) [2,3]
PG 64 or lower	Tex-242-F	7,000	12.5	3
PG 70	Tex-242-F	15,000	12.5	3
PG 76 or higher	Tex-242-F	20,000	12.5	3

1. The Engineer may accept Hamburg Wheel test results for production and placement if no more than 1of the 5 most recent tests is below the specified number of passes and the failing test is no more than 2,000 passes below the specified number of passes.
2. Rut depth tested @122°F
3. Unless approved otherwise.

When using RAP and/or RAS, include the management methods of processing, stockpiling, and testing of RAP and/or RAS in the QCP submitted for the project. If RAP and RAS are used in the same mix, the QCP must document that both of these materials have dedicated feeder bins for each recycled material. Blending of RAP and RAS in one feeder bin or in a stockpile is not permitted. Deleterious materials in RAP or RAS stockpiles should not exceed 1.5%, as determined by Tex-217-F, Part I and III.

RAP must be fractionated for all surface mix applications.

Complete all roadways before final surface course placement, unless directed otherwise.

Ensure placement sequence to avoid excess distance of longitudinal joint lapback not to exceed one day's production rates.

Use a device to create a maximum 3H: 1V notched wedge joint on all hot mix joints of 2 in. or greater. Consider subsidiary to the pertinent Items.

Submit any proposed adjustments or changes to a job mix formula to the Engineer before production of the new job mix formula.

Tack every intermediate layer, unless otherwise directed. Do not dilute tack coat. Apply it through a distributor spray bar in accordance with Article 316.3(A) Distributor.

When surface irregularities, as defined in Article 3268.4.I.3.c(5), "Irregularities", are detected or measured, the Contractor must take immediate corrective action defined as the removal and replacement of a full lane width of the defective area using a paver to place new mix, unless otherwise directed. If there are multiple defective areas within a sublot, making up to 30% of the sublot by area, the Engineer will require the entire sublot be removed, unless directed otherwise.

Provide a minimum transition for all side streets of at least 12 feet and driveways of at least six (6) feet, unless otherwise shown on the plans or otherwise approved/directed.

Shoulders and ramps are not subject to in-place air void determination and pay adjustment.

Submit thermal and segregation profiles as well as longitudinal joint densities on electronic forms provided by TXDOT.

ITEM 354 - PLANING AND TEXTURING PAVEMENT
Remove the loose material from the roadway before opening to traffic.

Plane a full lane width before opening to traffic at the end of a work period.

Accomplish a 2-inch depth of planing and texturing in two passes. A single cut will be permitted if at most a 1¼-inch vertical offset is created against adjacent lanes when opened to traffic at the end of a work period.

Accomplish the 2 inch Planed Butt Joint only when there is at least 4 inches of existing thickness of ACP. Consider the determination of existing thickness of ACP as subsidiary to the various Items.

Taper transverse faces at ends of passes as directed.

Make Transverse Tapers on each end of each pass using a minimum slope rate of 50 feet H to 1 inch V.

ITEM 360 – CONCRETE PAVEMENT
Provide approved connectors to existing pavement. Consider subsidiary to the pertinent Items.

ITEM 400 - EXCAVATION AND BACKFILL FOR STRUCTURES
Cut pavements with the use of a saw as directed. Consider subsidiary to pertinent Items.

Obtain approval of all compaction equipment prior to all backfilling and embankment operations.

Use 2" washed, crushed stone with 0% passing a No. 4 sieve to backfill for bridge ends. Consider subsidiary to the pertinent Items. Provide weep holes out the face of the backwall, as directed.

ITEM 402 – TRENCH EXCAVATION PROTECTION
Prior to construction, submit a Trench Excavation Plan for TxDOT's records.

ITEM 416 - DRILLED SHAFT FOUNDATIONS
Stake all Foundations, for approval, before beginning drilling operations, as directed. Examples of types of foundations are Bridge Supports, Traffic Signal Pole Foundation, Roadway Illumination Assembly Foundations, Sign Support Locations, etc.

Calculate the vertical signal head clearance before placing any Traffic Signal Pole Foundation.

Obtain approval before placing additional exposed Traffic Pole Foundation.

Set anchor bolts for Mast-Arm Signal Poles and Strain Poles. Set two in tension and two in compression. Obtain approval of anchor bolt placement as directed before placing concrete.

Field cut holes for anchor bolts only as directed.

Remove spoils, daily, out of flood plain, or as directed.

Take one core hole at each abutment and bent, as directed.

ITEM 420 - CONCRETE STRUCTURES

Where Retaining Walls are integral parts of the abutment header, do not place the abutment cap prior to backfilling the wall and the abutment area up to the elevation of the bottom of the abutment cap.

The "H" values shown on Bridge Layouts are estimated column heights. Calculate the actual column heights based on field conditions.

Perform work during good weather unless otherwise directed. If work is performed at Contractor's option, when inclement weather is impending, and the work is damaged by subsequent precipitation, the Contractor is responsible for all costs associated with replacing the work, if required.

Prior to the completion of work, stencil the National Bridge Inventory (NBI) number (structure number) on each structure built/shown on this project, as directed. Verify with the Engineer that the NBI number, which is shown on each Bridge Layout, is the number to use. Stencil the NBI number in an approved location on each bridge. Consider subsidiary to the pertinent Items.

ITEM 421 - HYDRAULIC CEMENT CONCRETE

Over-design requirements for compressive strength are waived for non-structural concrete, as defined in Table 5, Item 421.4. Construction.A.

Minimum air-entrainment requirements are waived for all classes of concrete, except for Class S, DC, or CO concrete. For all classes of concrete, except for Class S, P, DC or CO concrete or non-structural concrete, as defined in Table 5, the entrained air content must not exceed 8% air.

For all non-pavement applications using Class S, DC or CO concrete, target 5.5% entrained air. If the air content exceeds the target air content by more than 3 percentage points, the load of concrete will be rejected.

All Class P concrete must be air-entrained. Target an entrained air content of 4.0%. To meet the air-entraining requirements, use an approved air-entraining admixture. If the air content is greater than 7%, the load of concrete will be rejected.

ITEM 432, 462, 466, 467
Remove all loose Formwork and other Materials from the Floodplain or drainage areas, daily, which could float off in a Stormwater Event, as directed.

ITEM 423 - RETAINING WALLS
Inlet drains behind retaining walls in flumed areas will be Neenah R-3924 or equal. Other designs may be substituted only with the permission of the Engineer. Per plans, such inlets are subsidiary to the retaining wall bid item as well as all piping to tie into storm drains and connecting to the storm drains.

Drill, epoxy, and place #4 bars @ 12 inch centers, as directed, to tie the riprap & riprap flume to the MSE Wall Coping.

Measure surface area of retaining wall between finished grade at top of wall, including coping, and estimated/proposed ground line shown on the plans plus one (1) foot.

Immediately backfill the face of the retaining wall after the wall height gets above the final grade in front of the wall.

Set top of footing or leveling pad at a minimum of one (1) foot below proposed ground.

Do not measure any footing adjustments made to accommodate the available optional designs. Supply the retaining wall fabricators with the drainage plans and large guide sign plans. Ensure the wall design accommodates the construction of inlets, conduit, and any other large drainage structure as shown on the plans.

Use the approved Mechanically Stabilized Earth (MSE) Wall Systems listed at: http://www.txdot.gov/business/contractors_consultants/bridge/retaining_wall.htm

Two feet either side of the width of the leveling pad must be compacted to meet ordinary compaction standards prior to placement of the leveling pad.

Verify each row of panel placement for specification tolerances after backfilling is accomplished and prior to placement of the next row of panels. Correct to within tolerance prior to placing subsequent rows of panels. Notify when a tolerance check is needed.

At no time will the retaining wall backfill material exceed the adjacent embankment operation by more than one embankment lift.

Build the wall backfill material a minimum of 24 inches horizontally beyond the end of the wall reinforcement. Compact it in accordance with 423.3.

Use a "modified" Ty "B" backfill material according to the following table:

Type	Sieve Size	% Retained
"B" mod	3 in.	0
	No. 4	85-100

Particles larger than ¼ inch will be angular or crushed. Rounded rock or gravel will not be allowed.

Retaining wall coping placement will be such that the outside face of the wall panels are not offset from the inside face of coping by more than 1½ inches.

Seal all form liner joints, in a manner acceptable to prevent leakage at the surface.

Provide the following surface finish for walls:
Retaining Wall No. 1: River Theme / Rock Pattern finish (see plan sheets 211A – 211M)
Retaining Wall No. 2: River Theme / Rock Pattern finish (see plan sheets 211A – 211M)
Retaining Wall No. 3: Smooth finish (match Wall No. 4 existing panels)
Retaining Wall No. 4: Smooth finish (match existing panels)
Retaining Wall No. 5: Smooth finish (match Wall No. 4 existing panels)

Consider surface finishes for concrete subsidiary.

Follow form liner manufacturer's recommended procedures for form liner construction.

The form liner will release clean and free of the concrete, without pulling or breaking concrete from the textured surface.

Provide a 5' x 10' test panel representative of the texture for the custom form-liner surface finish prior to beginning precast operations. The surface texture will be subject to approval. If directed, construct additional test panels until a satisfactory surface treatment is obtained. Retain the approved test panels for use as standards of comparison for the production of the retaining wall panels. Consider subsidiary to the pertinent Items.

Retaining Wall No. 4 will be built onto an existing retaining wall from Sta 10+89.48 to Sta. 12+60.00. Payment for this unique wall will be paid 2' below existing top of wall. Design parameters for the earth reinforcement and other elements of the existing wall can be obtained from shop plans available from the TxDOT South Travis Area Office. Contractor shall verify that the lengths of the existing straps for the portion of the wall to be retained are adequate for the complete proposed wall height and configuration. If the existing elements of the wall are not adequate, the Contractor shall immediately notify the Engineer.

Contractor shall verify in the field that the lengths and spacing of the existing earth reinforcement match the values provided in the shop plans. If the values do not match, immediately notify the Engineer.

Upon approval of test panel, use the approved form liners throughout the project.

ITEM 425 – PRECAST CONCRETE STRUCTURAL MEMBERS
Hold a Prephase meeting with the Engineer for the erection of concrete members, such as Precast-Prestressed Concrete Beams & Precast-Prestressed Concrete Panels, prior to the work, as directed.

ITEM 427 – SURFACE FINISHES FOR CONCRETE
Provide form liner surface finishes of the types and at locations shown in the plans.

Provide opaque concrete sealer colors that match opaque concrete sealers on project at FM 1626/ Kyle Parkway. Final color selections will be as approved by the Engineer.

Apply opaque concrete sealers to the following surface areas at the intersection of IH 35 and Yarrington Rd: All concrete surfaces of railing; exterior vertical faces of bridge slabs; the underside of overhanging slabs to the point of juncture of the supporting beam; outside faces of exterior beams; bottoms of all beams; all exposed vertical surfaces of bents and bottom surfaces of bent caps; all exposed surfaces of abutments, obelisks, and bridge wing walls.

Prepare for approval a 9-sq. ft., 3-in. thick specimen prior to beginning work for each color and method of application.

Proved a Surface Area I, **Rub Finish** to all concrete structures, except those with form liner surfaces. Perform the Rub Finish as soon as possible after form removal. Complete the finish application within 5 calendar days from the pour date. Should the completion of the finish work fall behind, or exceed the 5-day period, pours of any additional structures will cease, until such time as the surface finish of existing structures is completed.

Place backer rod in retaining wall panel joints and simulated mortar joints to keep joints from being covered with opaque sealer. Remove backer road after retaining wall panels have been coated with sealer. Consider placement of backer road subsidiary to various bid items.

Follow form liner manufacturer's recommended procedures for form liner construction.

When forms are not removed in time, perform low pressure water blasting to the concrete surfaces.

The form liner will release clean and free of the concrete, without pulling or breaking concrete from the textured surface.

Seal all form liner joins, in a manner acceptable to prevent leakage at the surface.

Vertical concrete stain for opaque sealer shall be water repellant.

Consider Surface Finishes for concrete as subsidiary to the pertinent Items.

Submit a containment plan that details the procedures and type and size of equipment proposed to keep public property, private property and the environment from being adversely affected by the cleaning and painting operations. Approval of the plan is required before cleaning and painting operations begin. Provide a system capable of collecting all falling paint chips and other debris. Store, characterize, and dispose of all recovered debris in accordance with 30 TAC 335, "Industrial Solid Waste and Municipal Hazardous Waste." Discharge liquids in accordance with the TCEQ Texas Pollution Discharge Elimination Program (30 TAC 305, "Effluent Guidelines and Standards for TPDES Permits") and Texas Surface Water Quality Standards (30 TAC 307). Alternatively, liquids may be captured, stored, and characterized for disposal at an authorized facility in accordance with 30 TAC 315, "Pretreatment Regulation for Existing and New Sources of Pollution," or 30 TAC 335, "Industrial Solid Waste and Municipal Hazardous Waste."

ITEM 428 – CONCRETE SURFACE TREATMENT
Provide a Concrete Surface Treatment Class II (Silane) for Bridge Slabs in accordance with DMS 8140.

ITEM 432 - RIPRAP
Make 4-inches thick unless otherwise noted or directed.

Make all mow strip riprap four (4) inches, unless otherwise directed.

Where any proposed riprap joins existing riprap, saw cut the existing riprap and dowel/epoxy the joint as directed. Consider subsidiary to the pertinent Items.

Additional riprap may be required, as determined by the Engineer, near the end of project completion, due to unanticipated erosion locations. Any additional, approved riprap will be paid under this Item.

Consider saw cutting of riprap as subsidiary.

Provide Class B Concrete for that riprap placed around ground mounted large signs and overhead sign structures.

ITEM 462, 464, 465, 466, 467
When RCP or structure is to be placed below finished roadway subgrade and there is less than three foot of fill from top of RCP to finished subgrade elevation, then Flowable fill is required, as directed. Payment made under Item 401.

ITEM 462 - CONCRETE BOX CULVERTS AND STORM DRAINS
Provide Shop Drawings, signed and sealed by a Licensed Professional Engineer, for all precast box culverts. Indicate the appropriate design load as shown on the plans (HS20 or HS25) and the maximum design depth of fill.

Use cohesionless backfill material of aggregate size range of ⅜-inch to 1½-inch, for bedding material.

ITEM 465 - MANHOLES AND INLETS
Adjust inlet locations to the upstream side of driveways to accommodate driveway relocation.

Consider excavation and backfill, frames, grates, rings and covers subsidiary to pertinent Items.

Salvage existing grates, which are to remain the property of the Department, as directed. Stockpile neatly as directed.

Provide temporary drainage at each curb inlet and maintain until the final course of asphaltic concrete pavement is placed.

ITEM 467 - SAFETY END TREATMENT
Cut pipe ends, in the field, to match roadway side slopes, or as directed. Apply asphalt base aluminum paint to the cut ends.

All Type II SET's shall have mitered pipe ends and cast-in-place riprap aprons.

ITEM 496 - REMOVING STRUCTURES
The Contractor's attention is directed to the fact that migratory birds tend to concentrate nesting on transportation structures. If migratory bird nests are present within the project limits, remove all old migratory bird nests only between September 1 and January 31 from any structure where work will be done. In addition, be prepared to prevent migratory birds from building nests between February 1 and August 31.

All methods used for the removal of old bird nests and the prevention of re-nesting must be approved by the Engineer, well in advance of the planned use.

In the event that any active nest of migratory birds is encountered on-site during project construction, all construction activity within the immediate vicinity of the nest will cease immediately. Contact the Engineer to determine how to proceed.

Notify TxDOT at least **30** days prior to any Bridge Removal that will require a **10-Calendar-Day**, Prior-To-Work Notification to Texas Department of State Health Services (DSHS). If the work does not happen on the notified date then another 10-Calendar-Day, Prior-To-Work Notification will be required.

Provide a detailed plan for the removal of the existing structure(s) to include the schedule of removal and list of all equipment to be used.

The structure or structures to be removed may have surface coatings, which may contain hazardous materials. Provide for the safety and health of employees and abide by all OSHA Standards and Regulations as well as those set by Texas Department of State Health Services (DSHS).

The structural steel to be removed may contain lead paint. Submit a proposed demolition plan for approval by the Engineer at least 60 days prior to the desired demolition date. Demolition

plan should limit disturbing where lead paint is located when possible. If flame cutting methods will be used and lead paint cannot be avoided, the Department will arrange to have the paint removed at the indicated flame-cutting locations. The paint will be removed by a separate contractor for a width of 4". No paint removal will be required if other demolition methods are employed.

ITEM 502 - BARRICADES, SIGNS, AND TRAFFIC HANDLING
Unless otherwise approved, no daytime closures (main lanes and frontage roads) will be allowed.

Nighttime lane closures will be allowed from 8:00 PM to 5:00 AM, unless otherwise shown on the plans.

No Daytime Lane Closures will be allowed, unless otherwise shown on the plans or as directed by the Area Engineer (AE).

The AE is the authority to approve additional lane closures, prior to any work.

Maintain a written record of documentation of "The Additional Approved Lane Closures."

At least two (2) lanes will remain open on the frontage roads, in each direction, at all times, unless otherwise shown on the plans or as approved by the AE.

Notify the Inspector so that they can notify Combined Transportation, Emergency, and Communications Center (CTECC) / Public Affairs Office, prior to implementing any "Approved Lane Closure" for a State Highway or Roadway. Provide notice no later than 11:00 AM (Central Time) and at least 24 hours prior to the closure. If the closure is scheduled on a Monday, then it will be called in by 11:00 AM on Friday. If the notification time falls on a State Holiday, which TxDOT observes, then make the notification to the Inspector by 11:00 AM on the day prior to the State Holiday. If you find you will need to report closure information after the 11:00 AM deadline, please contact Area Office for Construction Closures and/or Lowell Choate for Maintenance Closures. Once they have approved the late notice, TxDOT will then provide the information to the Public Information Office.

Also, provide "Advance Notice" of the Actual Lane Closure(s), on the Day (Night) of the Actual Lane Closure(s), to the TxDOT Inspector so that they can notify CTECC. Also, immediately upon removal of the Closure(s) provide notice to the TxDOT Inspector for them to notify CTECC.

Submit and secure concurrence, prior to the publication of any notices or placement of any traffic control devices for implementation of the traffic control plan, hereinafter called a Lane Closure Notice (LCN).

Present to TxDOT, an LCN for traffic control, which is proposed for implementation, a minimum of four (4) full working days preceding any proposed implementation date. Indicate the estimated date, time, duration, and location for the proposed work. As a part of the LCN submit a written description of the lane closure(s) depicting the proposed traffic control devices

used, based on the appropriate plan sheet, TxDOT or TMUTCD standards, and an operational description of the work to be performed.

Present to TxDOT, LCN's proposed to detour traffic, a minimum of seven (7) full calendar days preceding any proposed implementation date.

Present to TxDOT, LCN's proposed for night work, a minimum of seven (7) full calendar days preceding any proposed implementation date.

Receive concurrence prior to LCN implementation.

Meet with the Engineer prior to roadway and lane closures to ensure that sufficient equipment, materials, devices, and workers will be used. Discuss contingency plans at that time. Consider inclement weather prior to implementing the lane closures.

Submit a cancellation of any lane closures, no later than noon on the day preceding the proposed work.

Coordinate Main Lane closures with adjacent projects.

Obtain prior approval for any Lane Closures of the mainlanes, which occur during peak hours. Maintain a minimum of **two (2)** lanes open on the frontage roads, in each direction, at all times. This includes 'full' closures of the Roadway, unless otherwise directed.

Take immediate action to modify Closures / Traffic Control, if at any time backup (roadway queuing) becomes unreasonable (greater than 20 minutes). Have in place, a contingency plan of how this will occur.

Utilize Shadow Vehicle with Truck Mounted Attenuator for setup and removal of each lane closure.

Do not set up any Lane Closure / TCP when the pavement is wet prior to the "setup," unless otherwise directed. Revise Traffic Control, when inclement weather is imminent, as directed.

Incorporate and maintain a 3H: 1V safety wedge into the proposed construction for any roadway edge of 2 inches or greater adjacent to a roadway under traffic.

Within the limits of the project, provide standard barricades, warning signs, delineators, lights, 28-inch cones, and flaggers in enough numbers and combinations, as directed.

Use a minimum of 2 flaggers, 2 advance warning flashing arrow panels (TY C), 2 of each signs CW20-5TR or CW20-5TL with appropriate distance plaques and CW9-2TR or CW9-2TL and 28-in. cones at each location in which milling or paving operations are in progress. Maintain at least 1 lane of traffic in each direction during paving or milling operations. Maintain at least the minimum numbers of lanes as directed.

Table 2 --- Definition of Peak and Off-Peak Hours

Roadway	Peak Hours	Off-Peak Hours
Main Lanes,Ramps, Frontage Roads and All Other Roadways	5:00 AM to 8:00 PM All Days	8:00 PM to 5:00 AM All Days

No Lane Closures on the Roadway that significantly reduce the level-of-service.

For Mainlanes use night-work and same-night remove-and-replace operations.

No Lane Closures during the Peak Hours as shown in **Table 2**. Traffic Control Devices for Lane Closures must be removed from the roadway during peak hours.

No closures will be allowed on the weekends, which include the following holidays: January 1, the last Monday in May, July 4, the first Monday in September, the fourth Thursday in November, December 25, Easter weekend, and the working day prior to or immediately after any of the aforementioned holidays. Unless otherwise approved, no closures will be allowed on the weekends of special events that could be impacted by the construction. Ensure all equipment, vehicles, workers, etc., associated with these closures are off the roadways and all lanes re-opened, at least, by noon of the Friday before these holidays and special events.

Place two (2) “Electronic” Portable Changeable Message Signs (EPCMS) at locations requiring lane closures for one-week prior to the closures, or as directed. Obtain approval for the actual message that will appear on the boards. If more than two phases of a message are required per board, provide additional EPCMS’s to meet the two-phases-per-board requirement.

Provide 3 “Electronic” Portable Changeable Message Sign(s) (EPCMS) as part of the traffic control operations and provide another one that is available to utilize when a backup is needed. Consider the one designated for backup as subsidiary to the various Items of the project. All EPCMS will be exclusive to this project, unless otherwise approved. Placement location and message as directed.

Use advance warning flashing arrow panels for the closing of traffic lanes. Furnish one stand-by unit, in good working condition at the jobsite, ready for immediate use.

Maintain access to all streets and driveways at all times, unless otherwise approved.
Furnish advisory speed signs in enough numbers as directed.

Furnish advisory speed signs in enough numbers as directed.

Maintain enough workers to revise traffic control as directed.

For each Lane Closure Set-up, provide a "Buffer Space" and Shadow Vehicle with Truck Mounted Attenuator (TMA), as directed.

Provide a "Downstream" Buffer Space (≈100' per lane with devices spaced at ≈20') for each lane closure setup, as directed.

Maintain construction-warning signs, which are needed for longer periods than what is shown on the traffic control plan or as directed. Consider subsidiary to the pertinent Items.

Cover or remove any existing sign(s), which conflict with temporary traffic control operations. Install all permanent signs, delineation, and object markers necessary for the operation of any roadway before opening that section of roadway to traffic**,** regardless of the phase during which the roadway construction occurs. Erect the signs on temporary mounts until the permanent mounts are installed. Consider any costs associated with the temporary mounts subsidiary. Repair or replace any signs, which are damaged by the Contractor's operations during construction or which are deemed not sufficient. The Engineer will be the sole judge of the adequacy of the sign(s).

Secure a 28-inch cone on top of any foundations that have protruding studs during construction. The cones will meet the specifications listed on BC (10)–07. In addition, they will be reflectorized, as described.
Maintain Sandbags that are used for ballast, as directed.

To determine an advisory speed limit to post for various curves and ramps within this project notify the Engineer.

Unless otherwise shown, all items required as part of Item 502 will be considered subsidiary.

ITEM 504 - FIELD OFFICE AND LABORATORY
Provide one field office (Type B structure) and one concrete laboratory.

Locate the Field Office as approved by the Engineer, and coordinate with all impacted Utility Companies. Provide adequate heating and air conditioning. Space heaters are unacceptable.

Furnish the Type B structure with a minimum of two desks, four chairs, tow filing cabinets, a conference table, a minimum of 2 closets, and a storage cabinet for the storage of State equipment. Make the cabinet a minimum of 3 feet wide by 2 feet deep by 3 feet high. Make provisions for locking the cabinet and Field Office securely.

Provide a photocopy/scanner machine, capable of photocopying/scanning 11" x 17" sheets, in the Field Office, for the exclusive use of TxDOT personnel. Provide DSL, or better, Internet service. Provide to TxDOT a computer meeting the minimum specification requirements in DMS 10101 "Computer Equipment" and wireless router capable of providing simultaneous internet access to at least four computers. Provide a color printer no older than 2 years old. The operation system must be Microsoft XP-SP2, unless directed otherwise. Computer must have at least two front USB ports. Consider subsidiary to pertinent Items.

Provide the Type B structure with a 240-volt electrical entrance service. This service shall consist of a minimum of four 120-volt circuits with 20-amp breakers and no more than two grounded convenience outlets per circuit. Provide a minimum of 2 double convenience outlets per room inside the structure. Support block and tie down the portable structures for stability. Consider subsidiary to the pertinent Items.

Provide a permanent, fully-equipped indoor restroom, with toilet and lavatory with hot and cold running water taps as part of the Type B structure. Provide a drinking water cooler with hot & cold taps and monthly drinking water service. Consider subsidiary to the pertinent items.

Provide a concrete testing facility measuring no less than 10 feet in width, 7 feet in height, and 20 feet in length. Adequately heat and air condition this facility. Provide one 220-volt and one 110-volt double outlet. Provide thoroughly cleaned, permanent and temporary molds, for the exclusive use of TxDOT personnel. Provide a cylinder tank and tank heater capable of maintaining the water temperature as required by Tex-447-A. Furnish water for the cylinder tank, and refill the tank as necessary. Provide and maintain a Cylinder Compression Machine (Breaker) for testing the cured concrete specimens. A lack of adequate molds available and on site, for testing purposes, could cause an interruption on job progress, at the sole expense of the Contractor. Consider subsidiary to this item.

Construct a 6-ft chain link barrier fence around the field office at a site determined by the Engineer. This enclosure is to be approximately 100 ft. x 100 ft., have one 12-ft. vehicular gate, and is used exclusively by state personnel and State vehicular storage. Provide a security light. Remove the fence upon completion of the project. Consider subsidiary to pertinent Items.

Perform any mowing in and around the field office area, as directed by the Engineer.

Asphaltic Material Testing Facility

Furnish a Type D structure for the asphalt-mix control laboratory for the Engineer's exclusive use. Ensure the floor has enough strength to support the testing equipment and has an impervious covering.

Ensure the Type D structure has adequate air conditioning and is furnished with a minimum of one desk, three chairs, one file cabinet, a telephone, and one built-in equipment storage cabinet for the storage of nuclear equipment. Make the cabinet a minimum of 3-feet wide by 2-feet deep by 3-feet high and make provisions for locking securely. Provide the structure with a 240-volt electrical service entrance. Provide a minimum of four 120-volt circuits with 20-amp breakers and at most two grounded convenience outlets per circuit and provisions for a minimum of two 220-volt ovens with vents to the outside. Provide a minimum of two convenience outlets per wall and a utility sink with an adequate clean potable water supply for testing. Space heaters for heating the structure are unacceptable. Provide support blocks and tie down portable structures for stability.

Provide an ignition oven for the use of Department to determine asphalt content in accordance to Tex-236-F. Provide other laboratory equipment as directed.

Provide to the Department and their representative a computer meeting the minimum specification requirements in DMS 10101 "Computer Equipment." Provide a color printer no older than 2 years old. The operation system must be Microsoft XP-SP2, unless directed otherwise. Provide DSL or better internet service. Computer must have at least two front USB ports. Consider subsidiary to pertinent Items.

Provide a permanent, fully equipped, indoor restroom, with toilet and running water as a part of the Type D structure, unless approved otherwise. Provide a monthly drinking water cooler with hot & cold taps and a monthly drinking water service, unless approved otherwise. Consider subsidiary to the pertinent Items.
Equivalent structures may be substituted for those specified under this Item, as agreed. The agreement must be in writing.

Maintain and repair any structure or equipment contained herein. Consider subsidiary to the pertinent Items.

Provide cleaning services to the field offices as needed but at least once a week. Provide sweeping and mopping floors, cleaning the toilet and lavatory, and emptying wastebaskets and other services as directed.

ITEM 1122 - TEMPORARY EROSION, SEDIMENTATION, AND ENVIRONMENTAL CONTROLS

Obtain the Engineer's approval for proposed methods used for erosion control before starting each phase of construction. Do not install erosion and sediment controls until immediately before work begins on the phase/step for which they are required.

Stockpile 4-inch by 8-inch (4" x 8") rock for emergency erosion control use, as directed. Place this rock in ditches and other areas, as directed. The Contractor will be reimbursed in accordance with Pertinent Items or Article 9.5, "Force Account."

Double-bag all sandbags used for erosion control items. Consider subsidiary to pertinent Items.

ITEM 508 – CONSTRUCTING DETOURS

Install temporary pavement in accordance with Item 3268.

ITEM 512 - PORTABLE CONCRETE TRAFFIC BARRIER

Consider any PCTB, which needs to be relocated or realigned, for any of various reasons, by a horizontal distance of 12 feet or less, subsidiary to the pertinent Items, unless otherwise agreed with the Engineer in writing. If new placement is different, vertically, from the original locations, then payment will be made as "Move." Consult with the Engineer prior to performing any "Move" Item of PCTB and Low Profile CTB (LPCTB).

Any increase in temporary barrier quantities that occur due to Contractor changes in the sequence of work or the traffic control plan will not be paid by the State, unless agreed to, in writing, before the change occurs.

Deliver all of the PCTB/LPCTB Connection Hardware to the Area Office or other location, as directed.

At the beginning of a project, if no hardware is available, furnish all necessary hardware to install the portable barrier. Reimbursement will be made through Item 9, Force Account, as directed.

ITEM 514 - PERMANENT CONCRETE TRAFFIC BARRIER (PCTB)
Provide for a height transition of the proposed barrier to allow a smooth tie-in to the existing barrier. Consider subsidiary to the pertinent Items.

At each location where Low Profile Concrete Barrier (LPCB) meets/adjoins PCTB or Permanent Barrier or Single Slope Concrete Barrier (SSCB), form and pour a concrete tie-in as directed. This work will consist of a small amount of dowelling of rebar and placement of other reinforcing. Consider subsidiary to the pertinent Items.

ITEM 530 – INTERSECTIONS, DRIVEWAYS, AND TURNOUTS
Notify property owners a minimum of 48 hours in advance of beginning work on their driveways. Provide, to TxDOT, a list of each notification and contact prior to each closure.

Provide access, at all times, to adjacent property. Construct driveways in one-half sections, to allow access.

Flex base for driveways is placed using ordinary compaction method.

Do not completely close driveways for reconstruction purposes, unless a reasonable alternate access exists to the property, as approved.

ITEM 540 - METAL BEAM GUARD FENCE
Adjust the limits of the Metal Beam Guard Fence (MBGF) to meet field conditions, as directed, before erection.

Before beginning the installation of the proposed MBGF, stake the locations for approval.

Furnish new, round, domed and unpainted timber posts. Furnish steel posts at locations where the minimum embedment shown on the plans for wooden posts cannot be achieved. Field verify the steel post lengths before fabrication. Consider the steel posts subsidiary to pertinent Items.

Salvaged W-Beam sections that are in suitable condition as determined by the Engineer and that meet current design guidelines may be used for the new MBGF installations.

Install all permanent MBGF and delineators, when the roadway is constructed in one-half widths, on that section, before opening the road to traffic.

If the existing MBGF will remain in its current, horizontal, location, after the overlay(s) has (have) been done, adjust MBGF Posts and Rail Elements to coordinate with the particular

overlay(s). Payment will be made according to specification Item 540.5.Payment.D.Guard Rail Fence Adjustment.

ITEM 542 – REMOVING METAL BEAM GUARD FENCE
Deliver all removed MBGF Rail Elements and removed Steel Posts that TxDOT deems as reusable, to TxDOT within a 50 mile radius of the project, as directed. Consider this work subsidiary to the various Items.

ITEM 545 - CRASH CUSHION ATTENUATORS (CCA)
If TxDOT supplied the CCA's, then return the crash cushion attenuators (completely repaired if damaged during or due to construction**,** upon completion of this project, to the Department at the approved stockpile location. Return all hardware with each attenuator.

When CCA's are Contractor supplied and they are not called to be placed in a permanent location, retain the CCA's as Contractor property, at the end of the project.

When the CCA's are supplied by the Contractor, provide crash cushions that work for 70 mph speeds.

When directed, obtain temporary attenuators from the Department, within a 50 mile radius of the Project. Provide necessary anchorage. Install and maintain the attenuators, as directed.

Upon removal of the CCA's provide a coring machine to remove the mounting hardware/bolts from the existing pavement. Core around the mounting hardware to at least the bottom of the HMACP/Top of base. Refill core holes with concrete or asphaltic material, as directed. Consider subsidiary to the various Items of the project.

ITEM 556 – PIPE UNDERDRAINS
Place pipe underdrains as shown in the plans or as directed during construction.

Filter material will meet the gradation requirements of concrete coarse aggregate (Grade 2, 3, or 4).

ITEM 585 - RIDE QUALITY FOR PAVEMENT SURFACES
Use pay adjustment schedule 1 to evaluate ride quality of the proposed overlay on existing pavement, in accordance with Item 585, "Ride Quality for Pavement Surfaces."

Use Surface Test Type B on the finished riding surface of all travel lanes except shoulders use Surface Test Type A.

ITEMS 610, 618, 620, 624, 628, & 684
Use materials from the prequalified material producer lists as shown on the Texas Department of Transportation (TxDOT) ------ Construction Division's (CST) material producer list. See TxDOT website (www.txdot.gov) – Business > Resources > Material Producer List - for list of pre-qualified manufacturers. Category is "Roadway Illumination and Electrical Supplies." No substitutions will be allowed for materials found on the list.

ITEM 610 - ROADWAY ILLUMINATION ASSEMBLIES

Neatly stockpile the assemblies upon removal, as directed, at the Austin District Headquarters located at 7901 N. IH 35.

For information on the electronic shop plan process, please visit the Bridge Division/Fabrication Branch web pages at:
http://www.txdot.gov/business/contractors_consultants/bridge/shop_drawings.htm

The Guide to Electronic Shop Drawing Submittal at:
ftp://ftp.dot.state.tx.us/pub/txdot-info/library/pubs/bus/bridge/e_submit_guide.pdf
and the Submittal Requirements table at:
ftp://ftp.dot.state.tx.us/pub/txdot-info/library/pubs/bus/bridge/electronic_submission.pdf
have been updated to include additional guidance on segmental bridge submittals.

And

Copies of the standard shop drawings are on file with Traffic Operations Division, Bridge Division, and the Materials Section of Construction Division. Additional shop drawings for roadway illumination assemblies built in conformance with these drawings are not required. Pre-approved shop drawing manufacturers and assembly model numbers can be found at:
http://www.txdot.gov/txdot_library/publications/business/construction/producer_list.htm
Category is Roadway Illumination and Electrical Supplies.

Provide 10-amp time delay fuses.

The local public utility will provide a 120/240-Volt Power Service Drop that will be utilized by the Illumination System installed within the project.

Provide luminaire ballasts with a 240-volt operating range.

Maintain all new and existing illumination for the duration of the contract.

All existing illumination, within the project limits, will remain operational until the last possible moment, as directed.

Place the illumination system in operation after satisfactory completion of the circuit tests. Final acceptance will not be made until the system has operated satisfactorily for a period of at least 14 consecutive days. Consider all repairs and adjustments subsidiary to pertinent Items. Pay for electrical energy during the trial period.

Inspection of all completed work provided in the Contract will be performed. The Contractor will be released from further maintenance on that project if the work is found to be satisfactory. Partial acceptance will be made and will be in no way void or alter any items of the contract.

ITEM 618 & 620 - CONDUIT & ELECTRICAL CONDUCTORS
For electrical licensing and electrical certification requirements see Item 7 of the current Standard Specification book and any applicable Special Provisions to Item 7.

ITEM 618 - CONDUIT
Use materials from prequalified material producers list as shown on the Texas Department of Transportation (TxDOT) - Construction Division's (CST) materials producers list. Category is "Roadway Illumination and Electrical Supplies."

Consider the polymer concrete barrier boxes subsidiary to ITEM 618, "CONDUIT."

Refer to plans and specifications for type of conduit. Waterproof and tighten all couplings and connections. Bring all proposed and existing conduit into a ground box and 'elbow' it unless otherwise shown on the plans. Provide a bushing to protect the wire from abrasion when a conduit run terminates.

Replace sections of conduit with the size and type shown on the plans in the event the existing conduit proves unusable due to location or damage.

Secure permission from the proper authority, as directed, before cutting into or removing any sidewalks or curbs for installation of this Item.

Saw cut and replace any riprap, which must be removed to install the conduit. Replace riprap with material and texture as directed.

The locations of conduit and ground boxes are diagrammatic and so shift, as directed, to accommodate field conditions.

Install conduit in an area not exceeding 2 feet in any direction from a straight line with the depth of the conduit at least 2 feet, unless otherwise shown on the plans. Installation of the conduit by jacking or boring method will be at a depth of at least 1 foot below the bottom of the base material of the roadway. Evidence of damage to the roadway during the jacking or boring operation will be enough grounds to stop the method being used.

Install conduit on a 2-inch sand cushion and backfill with at least 6 inches of sand. Backfill the remainder of the trench with flexible base, soil or two-sack concrete as required by the location of the conduit or as directed.

Consider all conduit elbows and rigid metal extensions required to be installed on PVC conduit systems subsidiary.

Install a high tension, non-metallic pull rope in all conduit runs. The pull ropes are for future use. Cap all empty conduit runs using standard weather tight conduit caps as directed. Consider this work subsidiary to the pertinent Item

Install a continuous bare or green insulated copper wire No. 8 AWG or larger in every conduit throughout the electrical system including installed loop detectors and traffic signal cables which are in conformance with the Electrical Detail Standard Sheets and the latest edition of the National Electrical Code (NEC).

Placement of conduit under the existing pavement using the open trench method will not be allowed without prior approval.

Seal all conduit ends with a permanently soft, non-toxic duct seal. The dust seal must not adversely affect plastic materials or corrode metals.
Use a coring device when drilling holes through concrete structures. Do not use masonry or concrete drills, unless otherwise approved.

Structurally mounted junction boxes shall be as shown on the plans. When used for traffic signal installations, these boxes shall be 12" x 12" x 8", and shall be approved. Consider these boxes subsidiary to this Item.

Use conduit hangers for 3 inch and larger conduit when hanging conduit from structures.

Place conduit a minimum depth of 42 inches below the bottom of ties.

Existing conduit may be proposed for reuse in this project. If the existing conduit cannot be used to place or add new electrical conductors, repair or replace this conduit, as directed. Repair of the conduit will be paid as “Extra Work” on a “Force Account” basis. Probe the existing conduit when locating drill shafts so that the existing conduit’s location will be known before it is needed.

When using existing conduit, ensure that all conduits have bushings and are cleaned of dirt, mud, grease, and other debris. Re-strap conduit that is being relocated to new timber poles as if it were a new installation. Consider this work subsidiary to this Item.

Consider all fittings, brackets, and junction boxes necessary to complete the installations subsidiary to the pertinent Items.

ITEM 620 - ELECTRICAL CONDUCTORS
Provide 10 amp time delay fuses.

Provide breakaway disconnects in all breakaway poles. For Flashing Beacon Assemblies (Item 685) and Pedestal Pole Asseblies (Item 687) within the project, provide single-pole breakaway disconnects. Provide Bussman HEBW, Littelfuse LEB, Mersen/Ferraz-Shawmut FEB, or equal on ungrounded (hot) conductors. Install dummy fuse (slug) instead of fuse. For all grounded (neutral) conductors, provide Bussman HET, Littelfuse LET, Mersen/Ferraz-Shawmut FEBN, or equal. These breakaway connectors have a white colored marking and a permanently installed dummy fuse (slug).

Clearly and permanently, mark "Illumination" on the Illumination Conductors installed in a Signal Mast-Arm Pole or Strain Pole. Make the marks easily visible from the hand hole.

Identify the conductors as shown on the Electrical Details Standard Sheets when two or more conductors are present in one conduit or enclosure. Use identification tag with two plastic straps. Each tag will indicate circuit number, letter, or other identification as shown on the plans.

Bond grounding conductors, which share the same conduit, junction box or structures, together at every accessible point, in accordance with the Electrical Detail Standard Sheets and the latest edition of the National Electrical Code (NEC).

All wiring will be in accordance with the National Electrical Code (NEC) and the appropriate Department standard sheets.

ITEM 628 – ELECTRICAL SERVICES
Notify Austin District Signal Shop of TxDOT, in a timely manner, at (512) 832-7012, to make arrangements for a Service Account.

The service enclosure provided in this contract will have provisions for pad locking the enclosure shut.

The traffic signal system will require 120/240-Volt Power Service provided by the Local Electric Utility Company. Make all arrangements for power.

Primary line extensions, connection charges, meter charges and other charges by the utility company, when required, will be paid for under Force Account Work. Ensure the costs associated with these charges are approved before engaging the utility company to do the work.

ITEM 644 - SMALL ROADSIDE SIGN SUPPORTS AND ASSEMBLIES
Fabricate all small signs not detailed on the plans in conformance with the latest edition of the "Standard Highway Sign Designs for Texas."
http://www.txdot.gov/txdot_library/publications/highway_signs.htm

ITEM 656 - FOUNDATIONS FOR TRAFFIC CONTROL DEVICES
Field cut holes for anchor bolts only as directed.

Provide all the materials needed for the installation of foundations under this Item.

ITEM 662, 666, & 672
Notify the Engineer at least 24 hours in advance of removing existing striping and placing pavement markings & markers.

Apply markings during good weather unless otherwise directed. If markings are placed at Contractor's option, when inclement weather is impending, and the markings are damaged by subsequent precipitation, the Contractor is responsible for all costs associated with replacing the markings if required.

ITEM 662 - WORK ZONE PAVEMENT MARKINGS

Place temporary pavement markings each night, as directed. Temporary flexible-reflective tabs will not be allowed as temporary pavement marking on the various roadways, unless otherwise approved.

If Temporary Flexible Reflective Tabs are allowed replace any missing tabs daily. If tabs are used, replace tabs at the Contractor's expense.

Remove work zone pavement markings within 48 hours after permanent striping has been completed.

Foil backed pavement markings will not be allowed.

ITEM 666 - REFLECTORIZED PAVEMENT MARKINGS

Apply Type I Reflectorized Pavement Markings no sooner than 14 days after applying the final course of HMACP, unless otherwise directed.

Reference existing channel islands, gores, and lane striping before commencing work. Provide referencing that will include a sketch of the layout to the Engineer. Obtain approval for placement of guidemarks from the Engineer before installing any permanent pavement markings. Consider subsidiary to the pertinent Items.

If TY II material is used (vs. an acrylic or epoxy) as the sealer for the TY I markings, place the TY II a minimum of 14 calendar days (to provide adequate curing) before placing the TY I markings.

Furnish double drop of TY II & TY III glass beads for all TY I markings.

Refer to Article 2.C.1. Glass Traffic Beads, Type I Markings. Furnish a double drop of Type II and Type III drop on glass beads where each type of bead is applied separately in equal portions (by weight). When furnishing a double-drop system, apply the Type III beads before applying the Type II beads.

ITEM 672 - RAISED PAVEMENT MARKERS

Place the bituminous adhesive at a temperature range of 380°F to 390°F. Place the pavement marker on the bituminous adhesive approximately 20 seconds after the adhesive is placed on the pavement. Ensure the pavement marker rests solely on the adhesive and not the pavement surface. Ensure that a minimum of ⅛ in. layer of bituminous adhesive remains between the pavement marker and the pavement surface.

ITEM 677 - ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS

Remove and dispose of, off the right of way, any existing raised pavement markings before beginning surfacing operations. Remove the existing traffic buttons and pavement markers, daily, as work progresses and as directed. Consider subsidiary to the pertinent Items.

Grinding is not an acceptable method of stripe removal.

Black paint will not be allowed, unless otherwise directed. Acceptable methods will be sand blasting (Blasting Method) or strip sealing (Surface Treatment Method).

ITEM 680 - INSTALLATION OF HIGHWAY TRAFFIC SIGNALS
Install all of the materials necessary for a complete signal system as follows:

Obtain State-provided materials from the Austin District Signal Shop at 7901 N I-35 after giving a two-week advance notice to Signal Shop Supervisor at (512) 832-7012.

Obtain materials provided by the City of San Marcos, including Opticom cables, from:
Ning Zou, Traffic Engineering Manager
Phone - (512) 393-8034
Fax – (855) 759-2839
E-mail: nzou@sanmarcostx.gov
Provide a two-week advance notice prior to picking up materials.

Furnish all other materials, tools, and labor required to provide a completed installation in accordance with the plans and specifications. Furnished materials provided by the Contractor will be new undepreciated stock.

Place the traffic signal into operation after the entire traffic signal has been completed, all required striping is complete, and all conflicting signing is removed. The TxDOT Austin District Signal Shop will be present to program the controller and assist with detection setup.

All illumination fixtures will be 250-watt, high-pressure sodium fixtures.

Furnish and install all permanent signs mounted on the traffic signal wires and traffic signal poles, which include pedestal pole assemblies. Furnish all hardware for installation. Consider all costs associated with the furnishing and installation of the permanent signs and the necessary hardware subsidiary to the pertinent Items.

Use a Vulcan swinger sign mounting bracket or equivalent for all signs mounted on span wires.

After the completion of the entire signal installation (including striping), a thirty-day (30-day) test period begins. After it has been determined, by the Department, that the field wiring and controller operation are satisfactory after this test period, and all other requirements of the project have been met, the Department will relieve the Contractor of any other responsibilities for the operation of the signal.

1. Use qualified personnel to respond to and diagnose all trouble calls during the thirty-day test period. Repair any malfunction to Contractor-supplied signal equipment. Provide to the Engineer a local telephone number, not subject to frequent changes and available on a 24-hour basis, for reporting trouble calls. Response time to reported calls must be less than 2 hours. Make appropriate repairs within 24 hours. Place a logbook in the controller cabinet and keep a record of each trouble call reported. Notify the Engineer of

each trouble call. Do not clear the error log in the conflict monitor during the thirty-day test period without the approval of the Engineer.

2. Remove the existing stop sign panels (or assemblies) after the traffic signals are in operation.

3. Install the supplied traffic signal controller and cabinet.

4. Connect all field wiring to the controller assembly. The **District** will assist in determining how the detector loop lead-in cables are to be connected, and will also program the controller for operation, program the video detection, hook up the conflict monitor, detector units and other equipment, and turn on the controller. Pick up the signal cabinet from the **District Signal Shop**. Have a qualified technician and a representative from the controller supplier (if Contractor supplied controller) on the project site to place the traffic signals in operation.

5. Notify the District Signal Maintenance Office at (512) 832-7012 one week before beginning any work involving traffic signals.

6. Notify the District Signal Maintenance Office at (512) 832-7012 and Area Office / Office of Inspection one week before beginning any work involving traffic signals.

ITEM 682 – VEHICLE AND PEDESTRIAN SIGNAL HEADS

Install signal head attachments so the wiring to each passes from the signal pole through the attachment hardware to the signal head. Refer to District Standard for more conductor attachment information. Attachment methods not shown on the district standard are to be approved by the Engineer before work begins. Use UV rated tie wraps.

Ensure the signal heads are made of aluminum and are hooded and covered until the signal system is put into operation.

Each signal head will be one way with the proper number of sections shown on the plans. Each head color will be bright yellow (Federal Yellow #13538 of Federal Standard 595). The inside of the visors will have a flat black finish.

Installed traffic signal heads within the project will have backplates unless otherwise shown on the plans. Backplates will be black aluminum.

Provide pedestrian signal head assemblies, which have a flush “egg-crated” or “Z” pattern visor for all lamps, and a one-piece reflector assembly for incandescent lamps only.

Provide louvers, which have five (5) vanes with a black finish on inside surfaces when required within the project. Fasten a hardware cloth screen, securely, with ⅝" or smaller mesh size to the front face of each louver to prevent entry by birds.

Mount signal heads level and plumb as directed.

Replace, at Contractor's expense, all burned out or defective lamps for a period of 4 weeks from the date of the initial turn on. At the end of this 4-week period, the Engineer will relieve the Contractor of any maintenance of this portion of the signal system.

Use the four point mounting system (TY A) for signal heads, except in cases of skewed or vertical heads when (TY B) will be used.

Place LED's at the proper angle with the ground. The wording "top" or the "up arrow" indicates the proper fixed alignment within the signal head. Hang the head parallel to the ground once attached and not angled down as with incandescent heads. Ensure the signal head to be level and within tolerances. LED's are designed to direct the indication towards the roadway surface.

Variance in head leveling will cause the LED indication to appear dim during slight movement. Ensure each LED head to be properly leveled and sight tested before final acceptance.

ITEM 684 – TRAFFIC SIGNAL CABLES
Leave at least 2 feet for each cable run in each pull box and leave at least 2 feet in each steel pole in addition to the required length for each separate cable. Provide an extra 5 feet of each conductor terminating in the controller cabinet. Ensure conductors are continuous without splice from terminal point to terminal point or as directed. Do not use wire nuts.

Provide a separate multi-conductor signal cable (14 AWG) inside pedestal poles and mast-arm signal poles from the terminal strip to each signal head as shown on the plans.

ITEM 686 - TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL)
Install air wings on all mast arms of 30 feet and over. Consider the cost for the provision and installation of air wings as subsidiary to the various bid Items found within this project.

Provide double nuts on top and bottom of the base plate as shown on the standards.

Provide signal pole assemblies as shown on plans. Luminaire lamps and the installation of the arms and lamps are considered subsidiary to the pertinent items.

When luminaires are to be installed on mast arm poles, provide a separate terminal strip in the signal pole access compartment. The terminal strip shall be a 4-circuit Buchanan-Type 104SN, Kulka-Type 985-GP-4 CU, or equivalent.

Provide a 10-amp time-delay fuse for traffic signal poles onto which luminaires are to be installed. Place the fuse in the fuse block indicated within note #4 found on State standard MA-D-07.

ITEM 687 - PEDESTAL POLE ASSEMBLIES

Furnish and install pedestal pole assemblies as shown on plans. Furnish all other materials, tools, and labor required to provide a completed installation in accordance with the plans and specifications. Furnished materials provided by the Contractor will be new undepreciated stock.

ITEM 688 - PEDESTRIAN DETECTORS AND VEHICLE LOOP DETECTORS

Pedestrian push buttons will be mounted at a height of 3'-6" (42") above the sidewalk or landing and will be of the type that have permanent-type signs within the detector unit (9" x 12" sign & push button station on Signal Poles and 5" x 7" sign & push button station on Pedestrian Poles), which explains their purpose and indicates which crosswalk signal is actuated.

Repair or replace any push button detector, which proves to be inoperable for a period of 4 weeks from the initial flash turn on date. At the end of this 4-week period, the Engineer will relieve the Contractor of any maintenance of this portion of the signal system.

Pedestrian Push buttons will be of substantial tamper proof construction. The push button will be ADA and TS 2 compliant. The push button will have a powder coated aluminum bezel with stainless steel actuator. The push button will utilize a momentary contact solid-state switching mechanism rated for 20 X 10^6 operations. The push button will provide visual and audible feedback to the pedestrian. The low movement push button will be functional in icing conditions. All fastening hardware will be stainless steel.

The audible feedback will be solely a confirmation chirp, be able to be turned on and off, and not conflict with any ADA issues.

ITEM 6266 - VIDEO IMAGING VEHICLE DETECTION SYSTEM (VIVDS)

Install the VIVDS cameras onto the mast arms with the attachment mechanisms provided with the camera system. Place the traffic signal cable (TY A) (3-conductor) (16 AWG) and the VIVDS communication cable coaxial in continuous and separate runs from each VIVDS camera to the controller. Consider the costs associated with the above work subsidiary to the pertinent Items.

Aim and adjust the cameras, install the cables and VIVDS cards into the controller cabinet and complete any other necessary work to bring the traffic signal into operation.

Provide the traffic signal cable and coaxial cable above and any incidentals necessary to install them.

Provide **5** cameras for this project, including one (1) spare camera.

Cameras and other related equipment must be compatible with existing equipment at the RM 150 intersection.

Provide a set-up system. Load required set-up software onto all of the District Signal Shop's notebook computers and provide all necessary licensing. Computers shall not be provided by the Contractor as part of the set-up system.

Provide and install all cables necessary to provide complete VIVDS operation. Provide a minimum of 10 cables to direct connect the notebook to the VIVDS port.

Phase red and green load switch outputs from up to sixteen (16) phases of a NEMA TS2 Type 2 controller shall be provided as inputs to the VPU for use with internal detector extend/delay timing functions. The C/VPU shall be able to condition the detector outputs and detection zones based on the state of the associated phase number and color.

The serial communication port on the front of the VPU shall be a DB-9 RS-232 connector. Supply a package that will operate with Windows XP and NT and provide the functionality defined in both sections 7.0 and 8.0 in both a direct connect and remote communications mode. The software resident in the VPU and the personal computer shall be capable of transmitting and receiving all information needed for zone set up, monitoring vehicle detection by viewing flashing detection zone overlays, and uploading/downloading and interrogating all stored data within the VPU. Remote communications with the VCU shall be possible with the addition of external communication devices (modem, Codec, etc.) using the RS-232 and video output ports on the front of the VPU.

The VPU operational software shall be stored internally in flash memory and be capable of being updated without the removal and replacement of memory devices.

Provide surge protection in the controller cabinet protecting the camera video and power inputs/outputs. All surge protection shall be dinrail mounted.

Install the VIVDS detection zones as directed. Have qualified personnel on site at the time of the signal turn-on to assist with the installation of detection zones.

If the camera locations shown in the plans do not allow for proper sight of the proposed detection zones, relocate the cameras as needed and as directed. This labor and material cost will not be paid separately, but is subsidiary to this Item.

The video output from the C/VPU shall be in color or black/white with active detection zones overlaid on full motion video.

ITEM 8961 – REMOVE & RELOCATE EXISTING CCTV FIELD EQUIPMENT

Notify the CTECC Operator at (512) 974-0883 at least 72 hours prior to disrupting service of the CCTV and Radio equipment. Care should be taken not to damage the equipment during removal and storage. Replace any damaged equipment at the Contractor's expense.

The CCTV pole has wireless radio transmission equipment that must be re-aimed in order to function properly. Contact the CTECC Operator at (512) 974-0883 at least 72 hours in advance to arrange assistance re-aiming the equipment. Care should be exercised when relocating pole. Replace equipment in a clean enclosure, free from dirt and debris. Replace any damaged equipment at the Contractor's expense.

ITEM 8963 - INSTALL SPREAD SPECTRUM RADIOS (SSR), CELL PHONE MODEM AND DIALUP MODEM

Install solar panel. Orient the solar panel for optimum exposure to sunlight (face to the south). Prior to installation, check the location to ensure there is not overhead obstruction that would block the solar panel from receiving full sunlight.

Install RVSD. Orient RVSD per manufacturer's requirements.

Install battery cabinet, batteries, equipment cabinet, cables, surge protector, cellular RS485 serial modem and mounting brackets.

All of the RVSD sites purchased under this project shall be networked back to one site where cellular RS485 serial modem telecommunication will communicate to the remote host computer. The "air time" charge shall be paid up for one year beginning upon completion of the project. Upon completion of the project the cellular account shall be transferred to Hays County. The Contractor shall provide the necessary information to indicate payment has been made for the service, as well as information for the County to complete the transfer of the account into the County's name.

Install cellular RS485 serial modem and surge protector.

Pull cables in pole and cabinets verify all cables are installed correctly and connected to appropriate equipment.

Verify the system is complete and functional per manufacturer's specifications.

Provide testing, training, documentation, final acceptance and warranty per special specification "RVSD assembly".

RVSD assembly consists of installation of one (1) radar vehicle sensing device, one (1) surge protector, one (1) 40' pigtail, one (1) cabinet with mounting brackets, one (1) solar assembly, and three (3) batteries; including all materials, equipment, labor, tools, and incidentals to complete the assembly and testing in accordance with the plans and specifications.

On the contractor selected RVSD site install one (1) cellular RS485 serial modem using power from the solar assembly; including all materials, equipment, labor, tools, and incidentals to complete the assembly and testing in accordance with the plans and specifications.

Each SSR location shall include one (1) unidirectional antenna and 30 LF of coaxial cable to be included in the estimate.

Accrue contract time charges through the contractor's completion of the final punchlist.

Required Items for ITEM 6266 - VIDEO IMAGING VEHICLE DETECTION SYSTEM:

Spec. Item	Description	Not Required	Required	State Supplied
2.F	REMOTE COMMUNICATIONS LINK		**X**	
5.0	VIVDS PROCESSOR UNIT		**X**	
6.A	CAMERA ASSEMBLY		**X**	
7.0	FIELD COMMUNICATIONS LINK			
	6 Twisted-Pair Cable / 18 AWG	**X**		
	Coaxial Cable w/Three (3) 16 AWG CNDRS		**X**	
	Fiber Optic Cable	**X**		
8.0	VIVDS SET-UP SYSTEM			
	Field PC	**X**		
	Field Software for District Shop laptops		**X**	
	Field Video Monitor /Ea. Inter.		**X**	
9.0	TEMPORARY USE AND RETESTING	**X**		
10.0	OPERATION FROM CENTRAL			
	Workstation Computer & Peripherals	**X**		
	Central Control Software		**X**	
11.0	INSTALLATION AND TRAINING			
	Eight (8) Hours		**X**	
	Sixteen (16) Hours	**X**		

The list of material below is for the Contractor's information only.
It is the responsibility of the Contractor to verify all items and quantities listed below.

LIST OF MATERIAL/LABOR
SUBSIDIARY TO ITEM 680

DESCRIPTION	UNIT	QUANTITY
250W HPS LUMINAIRE	EA	4
2-CHANNEL DETECTOR CARDS	EA	X
REGULATORY SIGN PANEL (R10-12, ETC)	EA	4
SINGLE STREET NAME SIGN PANEL	EA	4